

APPENDIX A

SPECIFICATION SUPPORT

TO

PARENT 1981 APPLICATION

(as referenced to Applicants' U.S. Patent No. 4,694,490)

AND

INSTANT APPLICATION

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
Independent Claim 2.				
A method of transmitting signals comprising the steps of:	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility-transmitting television programming, radio programming, and making other electronic transmissions.	Page 324 lines 8-24.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...
inputting a signal and	Column 10 lines 61-63.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62.	Page 324 lines 23-31.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.
a transmission schedule associated with said signal,	Column 11 lines 21-22.	Such input information might include the cable television system's complete programming schedule,...	Page 326 lines 30-31.	Such input information can include the complete programming schedule of the station of Fig. 6,....
said transmission schedule including code designating said signal and at least one of:	Column 11 lines 21-24.	Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code ...	Page 326 lines 30-33.	Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information.
(1) a time at which to transmit said signal; and	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit,....
(2) one of a frequency and an output network on which to transmit said signal;	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
	Column 6 lines 26-30.	system, 93. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.	Page 29 lines 11-15.	the unit, The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.
transmitting said signal according to said transmission schedule;	Column 11 lines 39-43.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 328 lines 9-13.	... said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 326 lines 28-30. Page 328 line 22 to page 329 line 1.	... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
selecting one of said code and an identifier	Column 11 lines 38-39.	By comparing identification signals on the incoming programming with the programming	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	References	Language
Appendix A		
associated with said signal; and	<p>schedule ...</p>	<p>dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
	<p>Column 11 lines 21-24.</p>	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>
	<p>Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code ...</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 326 lines 30-33.</p>
logging transmission of said signal.	<p>Column 12 lines 45-53.</p>	<p>Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information.</p> <p>Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	References	Language
	facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs.		contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.
Independent Claim 3.			
A method of processing signals to control a plurality of receiver stations, each receiver station having	Column 10 lines 15-23. Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions. The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ... Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to

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	References	Language	References	Language
	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.	persons. Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
a processor, said method comprising the steps of:	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	Page 324 lines 8-24.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...
	Column 17 lines 62-64.	Signal processor, 200, is always operating and monitors all incoming channels.	Page 397 lines 17-20.	Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above;
receiving an information transmission and communicating said information transmission to a storage device;	Column 10 lines 40-43.	All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, ...	Page 324 lines 31-35.	... Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire to a conventional matrix switch, 75, well known in the art, that outputs to one or more recorder/players, 76 and 78, ...
receiving a control signal	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...	Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said

Appendix A

Claim Language	References	Language	References	Language
				<p>transmission that are addresses to ITS apparatus of said intermediate transmission station; ...</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>....monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
<p>which is effective to control a first of said plurality of receiver stations to transmit said information transmission and</p>	<p>Column 11 lines 38-43.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Appendix A</p> <p>information and/or monitor information.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular</p>
	<p>Column 11 lines 50-57.</p>	<p>Page 49 lines 26-27.</p> <p>Page 327 line 35 to page 328 line 13.</p> <p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	

Claim Language	References	Language	References	Language
		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.
		Appendix A		
to control a second of said plurality of receiver stations to identify and	Column 19 lines 17-23.	<p>from TV receiver, 53, to the output that leads to modulator, 87.</p> <p>... processor or monitor, 12, ... reacts, ... by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25.</p>	<p>preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
		Appendix A
		message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.
		Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.
		Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.
		... to receive the transmission of cable channel 13; ...
		Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.
		Receiving said please-fully-enable-WSW-on-CC13-at-
process at least a portion of said transmitted information transmission;	Column 19 lines 23-29.	
	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer,	
	Page 436 line 9 to page 437 line 3.	
	Page 439 lines 14-15.	
	Page 437 lines 1-6.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	References	Language
		205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."				<p>particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, ...</p> <p>... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, ...</p> <p>Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...</p> <p>... and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>When the "Wall Street Week" transmission</p>
				<p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p> <p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p> <p>Page 445 line 24 to page 446 line 1.</p> <p>Page 445 line 35 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p>		
	Column 19 lines 45-	When the "Wall Street Week" transmission		Page 451 lines 6-7.		

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
49.	begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...	Appendix A begins at 8:30 PM on a Friday evening, ... Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. Microcomputer, 205, evaluates the initial signal word or words which instruct it to the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...
selecting one of the group consisting of:	Column 11 lines 57-61. Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/computer, 73, selects a video recorder/player, 76 or 78, ...	<p>Page 23 line 35 to page 24 line 4.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-6.</p> <p>Page 451 lines 7-9.</p> <p>Page 329 line 2-15.</p> <p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A

				upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; ...
(1) a time at which to	Column 11 lines 57-60.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission,...	Page 329 line 2-20.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information. ... Receiving said message causes computer, 73, to determine, ... that said "code" information matches ... schedule information of programming that is scheduled to be ... transmitted to the field system, 93, at a later time. So determining causes computer, 73, ... to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
communicate said control signal; and	Column 11 lines 61-64.	... in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...	Page 329 lines 13-20.	... in its preprogrammed fashion, ... to ... record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
(2) a storage location to which to	Column 11 lines 60-61.	... controller/ computer, 73, selects a video recorder/player, 76 or 78, ...	Page 329 lines 13-15.	So determining causes computer, 73, ... to select a video recorder/player, 76 or 78; ...
communicate said control signal;	Column 11 lines 61-64.	... in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...	Page 329 lines 13-20.	... in its preprogrammed fashion, ... to ... record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
					Appendix A
communicating said control signal based on said step of selecting; and	Column 11 lines 57-64.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...	Page 329 line 2-20.	inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.	
storing said communicated information transmission and said control signal at said storage device.	Column 11 lines 64-65. Column 16 lines 25-32.	... and instructs the recorder/player, 76 or 78, to turn on and record the programming. One particular advantage of these methods for monitoring programming is that, by locating the identifier signals in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for ...	Page 329 line 15-16. Page 319 lines 23-30.	... to cause said selected recorder, 76 or 78, to turn on and record programming, ... One particular advantage of these methods for monitoring programming is that, by embedding the SPAM information in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for ...	
Dependent					

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

Claim 4. The method of claim 3, further comprising one of the steps of: embedding said control signal in said information transmission;				
	Column 4 lines 5-9.	These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. ...	Page 13 lines 25-28.	The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.
	Column 16 lines 25-32.	One particular advantage of these methods for monitoring programming is that, by locating the identifier signals in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for gathering statistics on what is recorded on video cassette recorders and on how people replay such recordings.	Page 319 lines 23-30.	One particular advantage of these methods for monitoring programming is that, by embedding the SPAM information in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for gathering statistics on what is recorded, for example, on video and audio cassette recorders and on how people replay such recordings.
embedding a code in said information transmission that	Column 4 lines 5-9. Column 11 lines 38-39.	These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. ... By comparing identification signals on the incoming programming ...	Page 13 lines 25-28. Page 327 line 35 to page 328 line 13.	The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. References	Language	Support to instant specification filed June 6, 1995. References	Language
			<p>Page 84 lines 26-28.</p>	<p>amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>... one complete signal instruction or information message unit. Examples ... are a unique code identifying a programming unit, or a ...</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C....</p> <p>Via a conventional multi-channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.</p> <p>Example #5 begins with the embedding and</p>
	<p>Column 2 lines 63-66.</p> <p>... one complete signal instruction or information message unit. Examples ... are a unique code identifying a programming unit, or a ...</p>		<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 14 lines 26-29.</p>	
	<p>Column 19 lines 14-15.</p> <p>... pass all program and channel identifiers on all programming being cablecast on the multi-channel system.</p>		<p>Page 435 lines 16-18.</p> <p>Page 248 lines 22-26 from example #5.</p> <p>Page 250 lines 13-16</p>	

Claim Language	References	Language	References	Language
				Support to instant specification filed June 6, 1995.
			<p>from example #5.</p> <p>Page 252 lines 15-35 from example #5.</p> <p>Page 267 lines 20-28 from example #5.</p>	<p>Appendix A</p> <p>transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...</p> <p>Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter- monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment) then meter-monitor segment information that includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
enables a processor to control	Column 19 lines 20-25.	<p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...</p>	<p>programming.)</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) By contrast, the...</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CCI3-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is</p>
		<p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>	

Appendix A

Claim Language	References	Language	References	Language
				<p>preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13; ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to</p>

Appendix A

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		References	
		Language		Language	
a presentation of mass medium programming contained in said information transmission in accordance with said control signal;	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	<p>receive the transmission of cable channel 13;</p> <p>...</p> <p>During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.</p>	
	Column 11 lines 57-64.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...	Page 329 line 2-20.	<p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.</p>	
communicating an identification code to said storage device and	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system,</p>	

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
			71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions monitor information that identifies what programming is available,.... Meter-monitor segments contain meter information and/or monitor information. ... one complete signal instruction or information message unit. Examples ... are a unique code identifying a programming unit, or a to cause said selected recorder, 76 or 78, to turn on and record programming, ... One particular advantage of these methods for monitoring programming is that, by embedding the SPAM information in the audio and/or video and/or other parts of the	
			Page 84 lines 26-28.	
			Page 28 lines 26-27.	
			Page 49 lines 26-27.	
		... one complete signal instruction or information message unit. Examples ... are a unique code identifying a programming unit, or a ...	Page 14 lines 26-29.	
		... and instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 329 line 15-16.	
storing said identification code at a storage location associated with said information transmission;	Column 2 lines 63-66. Column 11 lines 64-65. Column 16 lines 25-32.	One particular advantage of these methods for monitoring programming is that, by locating the identifier signals in the audio and/or video and/or other parts of the	Page 319 lines 23-30.	

Claim Language	References	Language	References	Language
Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language	Language	Language
		programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for gathering statistics on what is recorded on video cassette recorders and on how people replay such recordings.		programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for gathering statistics on what is recorded, for example, on video and audio cassette recorders and on how people replay such recordings.
communicating to and storing at said storage device some information to	Column 11 lines 57-65.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 329 line 2-22.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73,

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
evidence one of an				determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available,....
	Column 15 lines 57-60.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each.	Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
			Page 315 lines 20-24.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.
			Page 44 lines 26-32.	Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. References	Language	Support to instant specification filed June 6, 1995. References	Language
Appendix A				
availability, use, and usage of one of said information transmission and mass medium programming contained in said information transmission at a user station;	Column 18 lines 29-41.	FIG. 6B also shows signal processor, 200, monitoring for a data gathering and ratings service.	<p>described more fully below.</p> <p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <ul style="list-style-type: none"> ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. <p>In addition, because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, ...</p> <ul style="list-style-type: none"> ... monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen Company) that collect statistics on viewership and programming usage. <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ...</p> <p>Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above escribed fashion.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ...</p> <p>Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The</p>	<p>Page 49 line 26 to page 50 line 20.</p> <p>Page 411 lines 10-11.</p> <p>Page 88 lines 19-22.</p> <p>Page 408 lines 18-29.</p> <p>Page 414 lines 13-27.</p> <p>Page 15 lines 16-22.</p>

Claim Language	References	Language	References	Language
		<p>The processors, 204 and 210, transfer this information to signal processor, 200, ...</p>	<p>Page 36 lines 32-33.</p> <p>Page 38 lines 11-14.</p> <p>Page 411 lines 10-15.</p> <p>Page 418 line 23 to page 419 line 15.</p>	<p>Appendix A</p> <p>input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause</p>
	<p>... for recording and subsequent transmission to a remote data collection</p>		<p>Page 411 line 28 to page 412 line 2.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	References	References	Language
	<p>site.</p>	<p>Page 173 line 30 to page 174 line 23 from example #3.</p> <p>Page 419 lines 4-15.</p> <p>Page 28 lines 25-35.</p>	<p>Appendix A</p> <p>a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in ...</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st" monitor information (#3).")</p> <p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A				
				so-called "ratings" stations that collect statistical data on programming availability and usage.
			Page 397 lines 17-20.	Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...
communicating to and storing at said storage device	Column 19 lines 23-27.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...	Page 437 lines 1-6.	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; instructions causes controller, 20, ...; to switch power on to video recorder/player, 217,.... ... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
			Page 439 lines 9-15.	
			Page 295 lines 6-8.	
			Page 439 lines 9-15.	
			Page 445 lines 24-27.	
			Page 446 lines 18-23.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Language	References	Support to instant specification filed June 6, 1995.	Language
<p>a second control signal which is effective at a user station to generate output to be associated with one of said information transmission and mass medium programming contained in said information transmission;</p>	<p>Column 19 lines 60 to page 20 line 2.</p>	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p>	<p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p>	<p>Appendix A</p>
<p>communicating to and storing at said storage device a second control signal which is</p>	<p>Column 11 lines 57-65.</p>	<p>Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73,</p>	<p>Page 451 line 3.</p> <p>Page 329 line 2-22.</p>	<p>And the Fig. 1C combining is displayed.</p> <p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For</p>	

Claim Language	References	Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.
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effective to			selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.			example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.
	Column 20 lines 27-36.	Five minutes later,	a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion,	Page 471 line 26 to page 472 line 17.		Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. Receiving said message causes controller, 20, to load and execute said check-for- entered-information-and-process instructions, and executing said instructions causes

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	References	References	Language
		<p>instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...</p>	<p>controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause an instance of ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p> <p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe... instructions ...</p> <p>... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said</p>
generate output to be associated with one of a	Column 20 lines 46-49.	<p>Page 476 line 34 to page 477 line 8.</p> <p>Page 477 lines 8-17.</p> <p>Page 473 lines 3-13.</p> <p>Page 477 lines 12-17.</p>	<p>Appendix A</p>

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Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
	<p>incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.</p>	<p>unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.</p>	<p>In line between each of the aforementioned receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, and matrix switch, 75, is a dedicated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, that splits each incoming feed into two paths. One path is the conventional path whereby programming flows from each given receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, to matrix switch, 75.</p> <p>Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire to a conventional matrix switch, 75, well known in the art, that outputs to one or more recorder/players, 76 and 78, and/or to apparatus that outputs said transmissions over</p>
<p>Column 10 line 64 to Column 11 line 1.</p>	<p>At distribution amplifiers, 63 through 70, each incoming feed is split into two paths. One is the conventional path whereby programming has flowed and continues to flow to recording devices, 76 and 78, and/or to flow to field distribution system, 93.</p>	<p>Page 325 lines 17-24.</p>	<p>Page 324 line 31 to page 325 line 2.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
display one of a	Column 19 lines 20-29.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 436 line 9 to page 437 line 6.	various channels to the cable system's field distribution system, 93, ... Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatusto cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of
		Then, in a predetermined fashion, microcomputer, 205, may ...		
		... instruct tuner, 214, to switch box, 201, to channel X ...	Page 439 lines 9-15.	
			Page 295 lines 6-8.	

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
	References	Language
		Appendix A
	... and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...	cable channel 13, thereby causing its associated converter box, 201, to convert itsinstructions causes controller, 20, ...; to switch power on to video recorder/player, 217,controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program. ...instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M,and to tune monitor, 202M, in a predetermined fashion.
	... and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on ...	Page 445 lines 24-27. Page 446 lines 18-23. Page 445 line 24 to page 446 line 1.
	... and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 35 to page 446 line 1. Page 446 lines 17-21.
combined and	Column 19 lines 67 to column 20 line 2.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ... And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
a sequential presentation of a mass medium program and	Column 19 lines 59-60.	Page 451 line 3. Page 26 lines 8-11. Page 25 lines 33-34. Then the host says, "And here is what your portfolio did."

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
a user specific datum;	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...
communicating to and storing at said storage device a second control signal which is effective to process	Column 11 lines 57-65.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 329 line 2-22.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.
	Column 20 lines 27-32.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, ...	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions; ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder,

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
a user reaction to mass medium programming contained in said information transmission;	Column 20 lines 19-26.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input." The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, to hold and process further ...	Page 471 lines 6-25.	<p>145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p> <p>Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.</p> <p>Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.</p> <p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given</p>	Appendix A
communicating to and storing at said storage device a second control signal which is effective to one of	Column 11 lines 57-65.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in	Page 329 line 2-22.		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A	
References	Language	Language	References	Language
	<p>a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.</p> <p>Column 13 lines 17-20.</p>	<p>a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.</p> <p>The signals that enable the decrypter/interrupter, 101, to decrypt and/or transfer programming uninterrupted may be embedded in the programming or may be elsewhere.</p> <p>Page 291 lines 9-24</p>	<p>SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.</p> <p>In the interval between said commence-enabling time and said 8:30 PM time, said head end is caused, ... to transmit a particular enabling SPAM message that consists of ... enable-CC13 instructions and particular enable-WSW instructions that include particular enable-WSW-programming information, ... <i>on the frequency of said master control channel</i>. (Hereinafter said message is called the "local-cable-enabling-message (#7).")</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...</p> <p>Page 289 lines 22-27</p>	<p>SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.</p> <p>In the interval between said commence-enabling time and said 8:30 PM time, said head end is caused, ... to transmit a particular enabling SPAM message that consists of ... enable-CC13 instructions and particular enable-WSW instructions that include particular enable-WSW-programming information, ... <i>on the frequency of said master control channel</i>. (Hereinafter said message is called the "local-cable-enabling-message (#7).")</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...</p> <p>In example #7, the controller, 20, of the signal</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
				<p>processor, 200, of Fig. 4 is preprogrammed at a particular time with particular information that indicates that the subscriber of said station wishes to view said "Wall Street Week" program when transmission of said program on cable channel 13 commences.</p> <p>particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system</p> <p>Executing said 1st-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions, to affect a first stage of decrypting the video information of the "Wall Street Week" program transmission.</p> <p>Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, ...</p> <p>And for example, determining that a local station is not preprogrammed properly and/or that decryption, ... apparatus are not functioning correctly may cause apparatus of said station ... interrogate remote station apparatus, by telephone, for cipher key and/or cipher algorithm instructions and information.. And for example, the transmitted programming ...</p> <p>At each station where a match fails to occur--which suggests that the preprogrammed SPAM operating information of said station has been tampered with in an unauthorized fashion....</p> <p>... each station where a match fails to</p>	Appendix A
	<p>communicate to a remote station a query in respect of information to be associated with said information transmission, and to enable display of mass medium programming contained in said information transmission;</p>	<p>Column 15 lines 20-25.</p> <p>In any of the cases illustrated in FIGs 4A through 4E, signal processors, 100, 103, 106, 109, and 112, could also operate in a predetermined fashion and telephone a remote site to get an additional signal or signals necessary for the proper decryption and/or transfer of incoming programming transmissions.</p>	<p>Page 290 lines 28-29</p> <p>Page 298 lines 17-21.</p> <p>Page 299 lines 19-22.</p> <p>Page 311 line 33 to page 312 line 8.</p> <p>Page 293 lines 32-35.</p> <p>Page 301 lines 6-9.</p>		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A				
communicating to and storing at said storage device a second control signal which is effective to				<p>occur--which indicates that a decryptor, 224, is not decrypting its received information correctly ...</p> <p>At each station where a ... a match does not result--which indicates that a decryptor, 224 or 231, is not decrypting its received information correctly ...</p>
	Column 11 lines 57-65.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.	<p>Page 308 line 35 to page 309 line 3.</p> <p>Page 329 line 2-22.</p>	<p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.</p>
	Column 20 lines 27-32.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal	<p>Page 471 line 26 to page 472 line 17.</p>	<p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
		Appendix A
control a user station to receive information to	<p>instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, ...</p> <p>This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...</p> <p>Column 20 lines 31-36.</p>	<p>aid-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission</p>
	Page 471 line 26 to page 472 line 17.	
	Page 476 line 34 to page 477 line 8.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A

<p>supplement one of said information transmission and</p>	<p>Column 20 lines 19-23.</p>	<p>Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input."</p>	<p>Page 477 lines 8-17.</p>	<p>that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p>
	<p>Column 20 lines 59-67.</p>	<p>(An alternate method for transmitting the recipe to printer, 221, would be for the recipe, itself, to be located in encoded digital form in the programming transmission recieved by TV set, 202.</p>	<p>Page 476 line 34 to page 477 line 3,</p>	<p>Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#".</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and ...</p>
<p>mass medium programming contained in said information transmission;</p>			<p>Page 473 lines 3-13.</p>	<p>One minute later, said program originating</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

			<p>studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe-and-shopping-list instructions ...</p> <p>The program originating studio ... transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India." ...</p> <p>At the station of Fig. 7 and 7F ..., apparatus is caused to receive ... said program ... at a tuner, 215, and ... monitor, 202M; ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...</p> <p>Automatically, said controller, 39, of decoder, 145, transfers said message to the controller, 39, of decoder, 203.</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p> <p>... shopping list at particular shopping-list memory; and outputs output information of said specific recipe and list to printer, 221.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare</p>
		<p>Page 469 line 35 to page 470 line 17</p>	
	<p>In this case, decoder, 203, would identify the signals conveying the recipe ...</p> <p>... and transfer them via processor, 204, to signal processor, 200, ...</p> <p>... which would decrypt them, itself, ...</p> <p>... and transfer them, via means which in this case it would have, to printer, 221).</p>	<p>Page 473 lines 14-15.</p> <p>Page 473 lines 26-28.</p> <p>Page 478 lines 1-5.</p>	
communicating to and storing at said storage device	Column 19 lines 23-27.	Page 474 lines 33-35.	
		Page 437 lines 1-6.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	Language	References
process a digital signal which contains television programming; and	<p>Column 19 lines 64-66.</p> <p>Column 19 lines 67 to column 20 line 2.</p>	<p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p>	<p>Page 26 lines 1-8.</p> <p>Page 451 line 3.</p> <p>Page 26 lines 8-11.</p>
communicating to and storing at said storage device one of	Column 11 lines 57-65.	<p>Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.</p>	<p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300' to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>And the Fig. 1C combining is displayed.</p> <p>TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	References	Language
	Column 4 lines 5-9.	Page 13 lines 25-28.	amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.
a code and	These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing, ...	The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.	Examples of signal units are a unique code identifying a programming unit, ...
a datum to serve as a basis for one of	Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming transmissions, identify and discriminate among one or more pieces of external equipment to which such signals are addressed, and transfer such signals to such equipment as directed.	The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; identifies the particular apparatus to which said signals are addressed, and outputs said signals to said apparatus ...
	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ...	Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205.	In due course, while scanning sequentially
(i) enabling an output	... processor or monitor, 12, ... reacts, ...	Page 435 lines 16-18.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
References	References	References
device to	by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	<p>ali channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ...</p>
		<p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
		Appendix A
display at least a portion of mass medium programming contained in said information transmission, and	Column 18 lines 56-58.	<p>program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p>
	<p>...signal processor, 200, to hold examples of the sought for unique signals in its buffer/ comparator, 8, and compare them with all incoming signals.</p>	<p>The signal processor, 200, of said station is preprogrammed ... with particular news-items-of-interest information that includes identification information of the particular stocks in said portfolio....</p> <p>One company whose stock is preprogrammed at said microprocessor, 205, is the American Telephone and Telegraph Company whose stock is identified by particular binary information of "T". And among the news-items-of-interest information at said RAM is an instance of said binary information of "T".</p> <p>...said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information....</p>
	<p>Page 439 lines 14-15.</p> <p>Page 420 lines 6-20.</p> <p>Page 422 lines 33 to Page 423 line 4.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
(ii) enabling a processor to process	<p>Column 19 lines 17-23.</p> <p>... processor or monitor, 12, ... reacts, ... by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>
		<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
		Appendix A
		<p>instructions causes microcomputer, 205, to ...</p> <p>Said instructions contain one instance, and ...</p> <p>program-unit-of-interest information that is programmed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i></p> <p>Automatically, microcomputer, 205, compares said one instance to said</p> <p>program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p>
	<p>Page 439 lines 14-15.</p> <p>Page 26 lines 1-8.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>... to receive the transmission of cable channel 13; ...</p> <p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	
References	Language	References	Language
<p>executable code.</p>	<p>Column 19 lines 46-53.</p>	<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.</p>	<p>Appendix A</p> <p>required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes</p>
		<p>Page 23 line 35 to page 24 line 16.</p>	
		<p>Page 44 lines 14-17.</p>	
		<p>Page 26 lines 20-28.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A				
				subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
Dependent Claim 5.				
The method of claim 3, wherein said control signal is	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available,....
			Page 84 lines 26-28.	
			Page 28 lines 26-27.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
stored within a portion of said information transmission, said method further comprising the step of	Column 11 lines 64-65.	... and instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
storing within said information transmission information to	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 329 line 15-16.	... to cause said selected recorder, 76 or 78, to turn on and record programming, ...
	Column 16 lines 39-41.	Each discrete bit of this information could be conveyed to recorder, 135, in a signal unit or units in the programming so received and recorded.	Page 13 lines 25-26.	The present invention employs signals embedded in programming.
serve as a basis for	Column 16 lines 45-47.	This time, TV signal decoder, 31, identifies the embedded signals and transfers them to signal processor, 131.	Page 320 lines 2-8.	Each discrete bit of this information could be transmitted to the subscriber station of Fig. 5 in meter-monitor information ... embedded in the transmitted programming. So embedding and transmitting said meter-monitor information would cause recorder, 217, to record said information.
evidencing at least one of:	Column 15 lines 27-30.	FIG 5 illustrates methods for monitoring reception and operation which methods can be used to gather statistics on programming usage and associated uses of other data transmissions and equipment.	Page 320 lines 27-31.	So playing back and transmitting the recorded programming to monitor, 202M, would cause TV signal decoder, 145, to detect said meter-monitor information and transfer said information, together with appropriate source mark information, to signal processor, 131
			Page 28 lines 25-29.	[Signal processor 200 in Fig. 7 and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage.
			Page 312 line 33 to page 313 line 8.	Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also,

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A

				for example, which local apparatus receives programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing
(1) a title of a television program;	Column 15 lines 62-63.	[The signals for which the decoders are monitoring] may convey unique identifier codes for each program or commercial.	Page 49 lines 26-28.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ...unique identifier codes for each program unit (including commercials);....
	Column 16 lines 32-35.	For example, a person might instruct video cassette recorder, 135, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.	Page 50 lines 6-7.	For example, a subscriber might instruct video recorder/player, 217, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.
(2) a use of programming;	Column 18 lines 30-35.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned,	Page 408 lines 18-29	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.
			Page 414 lines 13-27	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44.
			Page 15 lines 16-22	The frequencies may convey television, radio, or other programming transmissions. The

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	
References	Language	References	Language
			Appendix A
		Page 411 lines 10-15	<p>input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p>
		Page 418 line 23 to page 419 line 15.	<p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p>
(3) a transmission station;	Column 15 lines 60-62.	Page 49 lines 26-28.	<p>[The signals for which the decoders are monitoring] may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.</p> <p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p>
		Page 50 lines 1-4.	<p>... origins of transmissions (eg, network source stations, broadcast stations, cable head end stations); dates and times....</p>
(4) a function performed at a receiver station;	Column 16 lines 45-47.	Page 320 lines 27-31.	<p>This time, TV signal decoder, 31, identifies the embedded signals and transfers them to signal processor, 131.</p> <p>So playing back and transmitting the recorded programming to monitor, 202M, would cause TV signal decoder, 145, to detect said meter-monitor information and transfer said information, together with appropriate source mark information, to signal processor, 131....</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
(5) a network;	Column 16 lines 32-35.	For example, a person might instruct video cassette recorder, 135, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.	Page 319 lines 30-33.	For example, a subscriber might instruct video recorder/player, 217, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.
(6) a broadcast station;	Column 15 lines 60-62.	[The signals for which the decoders are monitoring] may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.	Page 49 lines 26-28. Page 50 lines 1-4.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ...origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times....
(7) a channel on a cable system;	Column 16 lines 35-39.	Recorder, 135, might receive the programming over Manhattan Cable TV channel 4 and record the programming from 7:00 PM to 7:30 PM on the evening of July 15, 1985.	Page 319 line 33 -- Page 320 line 2.	Recorder, 217, might receive the programming over Manhattan Cable TV channel 4 and record the programming at the time of original broadcast transmission--from 7:00 PM to 7:30 PM on the evening of July 15, 1985.
(8) a time of transmission;	Column 15 lines 60-62.	[The signals for which the decoders are monitoring] may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.	Page 49 lines 26-28. Page 50 lines 1-4.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ...origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times....
(9) a identification signal; and	Column 15 lines 57-60.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each.	Page 315 lines 20-24. Page 44 lines 26-32.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned. Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
			assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.	
			Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data.	
(10) a source or supplier of data.	Column 15 lines 63-65.	In the case of data transmitted to the micro- computer, they may be unique codes that identify the source and suppliers of the data.	Page 49 line 26 to page 50 line 20. Page 49 lines 26-28. Page 50 lines 19-20.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:.... ...unique codes that identify the sources and suppliers of computer data.
Dependent Claim 6.				
The method of claim 3, said method further comprising the steps of:				
generating one from the group consisting of:	Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...	Page 59 lines 29-33. Page 25 lines 34-35. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. At this point, an instruction signal is generated at said program originating studio, ... The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
(1) a datum that identifies a microprocessor instruction in said information transmission;	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	monitor segment of five fields and addresses URS microcomputers, 205.
	Column 19 lines 46-48.	...several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 14 line 35 to page 15 line 2. Page 23 line 35 to page 24 line 4. Page 37 line 26 to page 38 line 8	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
(2) a datum that designates an addressed apparatus;	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
	Column 19 lines 46-48.	...several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. In each decoder, the controller, 39, 44, or 47,

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	References
References	Language	Language	Language
	<p>Column 17 lines 39-44.</p> <p>Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming transmissions, identify and discriminate among one or more pieces of external equipment to which such signals are addressed, and transfer such signals to such equipment as directed.</p>	<p>38 line 8</p> <p>Page 15 lines 16-23.</p> <p>Page 34 lines 24-26.</p> <p>Page 44 lines 14-15.</p> <p>Page 95 lines 18-21.</p>	<p>Appendix A</p> <p>receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ...</p> <p>... identifies the particular apparatus to which said signals are addressed, and outputs said signals to said apparatus ...</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ...</p> <p>Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205.</p> <p>Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>Receiving said message causes controller, 20, to load the enable-CC13 instructions and the enable-WSW instructions of the information segment of said message at</p>
(3) a datum that is part of a decryption code;	<p>Column 3 lines 6-8.</p> <p>Column 13 lines 31-32.</p>	<p>Page 14 line 35 to page 15 line 2.</p> <p>Page 292 lines 7-11.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language	Appendix A
						particular RAM of controller, 20, and execute said instructions as the machine language instructions of one job. An information segment can transmit any information that a processor can process. It can transmit compiled machine language code or assembly language code or higher level language programs, all of which are well known in the art. Resulting in a match causes controller, 20, to execute a particular portion of said enable-CC13 instructions. Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission,..... ...thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio). Automatically, controller, 20, selects information of cipher key Ca from among the information of said portion; transfers said cipher key information to decryptor, 107; and causes decryptor, 107, to commence decrypting its received audio information, using said key information and selected decryption cipher algorithm C, and outputting decrypted information of the audio portion of the "Wall Street Week" program.... Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
				Page 54 lines 2-6. <		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Language	Language	Language
Appendix A		
	schedule ...	dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
		SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information. ... instruction signals embedded in the "Wall Street Week" programming transmission.
embedding said generated one in said information transmission.	Column 19 lines 43-44. Column 19 lines 60-63.	Page 84 lines 26-28. Page 28 lines 26-27. Page 49 lines 26-27. Page 21 lines 23-24. Page 59 lines 29-33.
		A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. At this point, an instruction signal is generated

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
			26 line 1. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	at said program originating studio, embedded in the programming transmission, and transmitted. The second message is of the information associated with the second command synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
Dependent Claim 7.				
The method of claim 3, further comprising the steps of: communicating a second control signal, said second control signal being one from the group consisting of:				
	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire ...
(1) a switch control signal;	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62,

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
				<p>and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>...monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>	Appendix A
(2) a timing control signal;	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
				<p>each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>	<p>Appendix A</p>
(3) a locating control signal;				<p>Page 84 lines 26-28.</p>	
(4) an instruct-to-contact signal that designates a remote receiver station;	<p>Column 8 lines 58-62.</p>	<p>Control signals can be passed to the apparatus by means of the programming transmissions input at switch, 1, and mixer, 2. An example of such a control signal is an instruction for the apparatus to contact a remote telephone unit.</p>		<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 290 lines 26-31.</p> <p>Page 291 lines 21-24.</p> <p>Page 59 lines 29-31.</p> <p>Page 402 lines 22-26.</p>	<p>... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ...</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.</p> <p>... causes said controller, 20, again to cause said switch, 1, and said mixer, 3, to input the transmission of said master channel to said decoder, 30, and to cause said decoder, 30, to commence processing to detect a SPAM end of file signal.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
References	References	References
		<p>Page 403 lines 7-12.</p>
<p>(5) an instruct-to-transfer signal that designates a unit of cablecast programming;</p>	<p>Column 11 lines 38-39.</p>	<p>Page 327 line 35 to page 328 line 13.</p>
		<p>Page 405 lines 20-29.</p>
	<p>By comparing identification signals on the incoming programming ...</p>	<p>Page 84 lines 26-28.</p>
		<p>Page 327 line 35 to page 328 line 13.</p>

Appendix A

Said message is detected at said decoder, 30, and inputted to the controller, 39, of said decoder, 30.

Receiving said message causes said controller, 39, to transmit said Read-Meters-of-Selected-Stations SPAM message to the controller, 20, of the signal processor, 200, of said station.

Executing said ones causes controller, 20, to transmit the current reading information of utilities meter, 262, to a remote metering station computer and cause said computer to process said information. Automatically, controller, 20, ... activates telephone connection, 22; inputs a particular telephone number ...

Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.

By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.

SPAM signals are generated at original transmission stations or intermediate transmission stations and **embedded** in television or radio or other **programming transmissions**....

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A

			<p>...monitor information that identifies what programming is available,...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>...monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>	<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 327 line 35 to page 328 line 13.</p> <p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p>			
(6) an instruct-to-delay signal that designates a unit of broadcast or cablecast programming;	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...					<p>Receiving the "1st-WSW-program-enabling-message (#7) causes controller, 20, to execute the aforementioned load- and-run-@20 instructions, to load the</p>
(7) an instruct-to-decrypt signal;	Column 13 lines 24-25.	The signal or signals instruct decrypter/interrupter, 101, to decrypt the transmission...					

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
					Appendix A
(9) an instruct-to-record signal that designates program;	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	<p>1st-stage-enable-WSW- program instructions of the information segment at particular RAM of controller, 20, then to execute the information so loaded as the so-called machine language instructions of one so-called job.</p> <p>Executing said</p> <p>1st-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions, to affect a first stage of decrypting the video information of the "Wall Street Week" program transmission.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter</p>	
			Page 84 lines 26-28.		
			Page 28 lines 26-27.		
			Page 49 lines 26-27.		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
	<p>Column 19 lines 20-27.</p> <p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p> <p>Then, in a predetermined fashion, microcomputer, 205, may</p> <p>instruct tuner, 214, to switch box, 201, to channel X</p>	<p>Page 436 line 9 to page 437 line 6.</p>	<p>information and/or monitor information.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information ... and said ... enable-WSW-on-CC13 ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
		Language
		Appendix A
(10) an instruction signal that controls a multimedia presentation;	<p>and may instruct and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p>	<p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... instructions causes controller, 20, ...; to switch power on to video recorder/player, 217, ...</p> <p>...controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV</p>
	<p>Column. 19 lines 60 to page 20 line 2.</p>	<p>Page 295 lines 6-8.</p> <p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p> <p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 26 lines 4-11.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
	<p>Column 19 lines 20-23.</p>	<p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25.</p>	<p>and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate television or radio or other programming transmissions....</p> <p>....monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ...</p>	<p>Appendix A</p>

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
		References	Language	References	Language
(13) an instruct-to-				page 437 line 3.	the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information. Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. ...to receive the transmission of cable channel 13;...
	Column 19 lines 27-28.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on		Page 439 lines 14-15. Page 445 line 24 to page 446 line 1.	...instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M,....
	Column 11 lines 38-39.	By comparing identification signals on	Page 327 line 35 to	Computer, 73, monitors incoming	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Language	Language	Language
<p>tune signal that designates a receiver or a frequency;</p>	<p>the incoming programming ...</p>	<p>page 328 line 13.</p>
		<p>programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>...monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired</p>
		<p>Page 84 lines 26-28.</p>
		<p>Page 28 lines 26-27.</p>
		<p>Page 49 lines 26-27.</p>
	<p>Column 19 lines 20-23.</p> <p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 267 lines 20-28 from example #5.</p>

Claim Language	References	Language	References	Language
			<p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>Appendix A</p> <p>programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	References	Language
	<p>Column 19 lines 28-29.</p> <p>and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>Page 439 lines 14-15.</p> <p>Page 445 line 35 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p>	<p>said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13;...</p> <p>...and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio....</p>
<p>(14) an instruct-to-coordinate signal that designates two apparatus;</p>	<p>Column 4 lines 5-6.</p> <p>Column 19 lines 20-29.</p>	<p>Page 13 lines 25-26.</p> <p>Page 436 line 9 to page 437 line 6.</p>	<p>The present invention employs signals embedded in programming.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
			Appendix A	
	Then, in a predetermined fashion, microcomputer, 205, may ...		Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CCI3-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CCI3-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatusto cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...	
	... instruct tuner, 214, to switch box, 201, to channel X ...		Page 439 lines 9-15.	
	... and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...		Page 295 lines 6-8.	
	... and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on ...		Page 445 lines 24-27. Page 446 lines 18-23.	...instructions causes controller, 20, ...; to switch power on to video recorder/player, 217,controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
	... and tuner, 215, to tune appropriately to "Wall Street Week."		Page 445 line 24 to page 446 line 1. Page 445 line 35 to page 446 line 1. Page 446 lines 17-21.	...instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M,and to tune monitor, 202M, in a predetermined fashion. In so doing, controller, 20, causes monitor,

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	References	Language
	<p>Column 19 lines 60-66.</p>	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs overlay to TV set, 202, ...</p>	<p>202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p>
Column 19 line 30.	Co-ordinating Multimedia Presentations	See generally page 447	Controlling Computer-based Combined

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
				Media Operations
(15) an instruct-to-compare signal that designates a news transmission or a computer input;	Column 18 lines 48-55.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200. The news services precede each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.	line 25 to page 457 line 10. Page 420 line 21 to page 421 line 7.	Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions. The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200. Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit- News-Item SPAM message In due course, said remote news-service-A station ...
(16) an identifier signal that causes a computer to instruct a plurality of tuners each to tune to a broadcast or cablecast transmission;	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate
			Page 84 lines 26-28.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
		Appendix A
	<p>transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) By contrast, the...</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that</p>	<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>
<p>Column 19 lines 20-25.</p>	<p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
			<p>Appendix A</p> <p>contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i></p> <p>Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13; ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p>
		Page 439 lines 14-15.	
		Page 437 lines 1-6.	
		Page 439 lines 9-15.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
	<p>Column 19 lines 27-29.</p>		<p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... ...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion. In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p>
(17) an instruct-to-coordinate signal that designates two units of multimedia information;	<p>Column 19 lines 60 to page 20 line 2.</p>	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his</p>	<p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is</p>

Appendix A

Claim Language	References	Language	References	Language
		own stocks' performance overlay the studio generated graphic.	<p>Page 26 lines 4-11.</p> <p>Page 451 line 3.</p> <p>Page 18 lines 24-27.</p> <p>page 450 line 27 to page 451 line 11.</p>	<p>preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p> <p>Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.</p> <p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the</p>

Appendix A

Claim Language	References	Language	References	Language
				Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.
				Support to instant specification filed June 6, 1995.
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Appendix A

<p>aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p>							
<p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred, and to transfer said signals to said apparatus.</p>	<p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p>	<p>Column 19 line 60 to column 20 line 1.</p>	<p>(18) an instruct-to-generate signal that designates an output datum;</p>			

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
		References	Language
		References	Language
(19) an instruct-to-transmit signal that designates a computer output;		This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...
	Column 19 line 60 to column 20 line 1.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
		This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
	Appendix A	
	instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...
(20) an instruct-to-overlay signal that designates a video image; and	Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ... Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance
	Page 25 line 34 to page 26 line 2. Page 37 line 26 to page 38 line 8.	
	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 4-11.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
					Appendix A
(21) an instruct signal that designates a function to perform if a predetermined condition exists; and	Column 20 lines 27-36.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion,	Page 451 line 3. Page 471 line 26 to page 472 line 17.	overlaid on the studio generated graphic. And the Fig. 1C combining is displayed. Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. Receiving said message causes controller, 20, to load and execute said check-for- entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause an instance of ... (An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station. In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter	
		instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...	Page 476 line 34 to page 477 line 8.		
			Page 477 lines 8-17.		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
				box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...
storing said second control signal in said.	Column 11 lines 64-65.	... and instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 329 line 15-16.	... to cause said selected recorder, 76 or 78, to turn on and record programming, ...
	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.	The present invention employs signals embedded in programming.
Independent Claim 8. A method of encoding signals to control a plurality of receiver stations comprising the steps of:				
	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
	Column 8 lines 58-59.	Control signals can be passed to the apparatus by means of the programming transmissions ...	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	Page 324 lines 8-24.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...
	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS.	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6;

Claim Language	References	Language	References	Language
Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A		
receiving and storing a first information transmission containing one of a first video image and audio;	Column 10 lines 61-64.	<p>6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.</p> <p>Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.</p>	<p>Page 396 lines 8-10.</p> <p>Page 324 lines 23-33.</p>	<p>and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.</p> <p>Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.</p> <p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...</p>
Column 11 lines 57-65.	<p>Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming. Instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.</p>	<p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76</p>	<p>Page 329 line 2-22.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
		Appendix A
receiving a second information transmission,	<p>Column 12 lines 57-58.</p> <p>This particular embodiment describes a transmission facility transmitting only television programming.</p>	<p>or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.</p> <p>So far this disclosure has described an intermediate transmission station that transmits conventional television programming....</p>
	<p>Column 11 lines 3-5.</p> <p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...</p>	<p>Page 339 lines 9-11.</p> <p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....</p>
	<p>Column 11 lines 38-39.</p> <p>By comparing identification signals on the incoming programming ...</p>	<p>Page 59 lines 29-33.</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p>
		<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73,</p>

Claim Language	References	Language	References	Language
				<p>determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>...monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what</p>
<p>wherein said second information transmission is effective to control a first of said plurality of receiver stations to transmit said first information transmission and</p>	<p>Column 11 lines 38-43.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 327 line 35 to page 328 line 13.</p>	<p>Appendix A</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
				<p>channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands.</p>	Appendix A
	<p>Column 11 lines 50-57.</p>	<p>... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>		
<p>to control a second of said plurality of receiver stations to identify</p>	<p>Column 19 lines 17-23.</p>	<p>... processor or monitor, 12, ... reacts, ... by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing</p>	<p>Page 435 lines 16-18.</p>		

Claim Language	References	Language	References	Language
		<p>these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>Appendix A</p> <p>The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ...</p> <p>... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said</p>

Claim Language	References	Language	References	Support to instant specification filed June 6, 1995. Language
<p>and process at least a portion of said transmitted first information transmission;</p>	<p>Column 19 lines 23-29.</p>	<p>... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>Page 439 lines 14-15. Page 437 lines 1-6. Page 295 lines 6-8. Page 439 lines 9-15. Page 445 lines 24-27.</p>	<p>Appendix A</p> <p>program-unit-of-interest information and determines a match with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20. ... to receive the transmission of cable channel 13; ... Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; instructions causes controller, 20, ... to switch power on to video recorder/player, 217, controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program. ... instructions causes controller, 20, to switch</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
			power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion. In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio instruction signals embedded in the "Wall Street Week" programming transmission. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Examples of signal words are a string of one or more digital data bits encoded together on a	
			Page 446 lines 18-23. Page 445 line 24 to page 446 line 1. Page 445 line 35 to page 446 line 1. Page 446 lines 17-21.	
		...instruction signals embedded in the "Wall Street Week" programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 21 lines 23-24. Page 26 lines 1-2. Page 37 line 26 to page 38 line 8.	
	Column 19 lines 43-44. Column 19 lines 63-64.		Page 25 line 34 to page 26 line 1. Page 14 line 35 to page 15 line 2.	
encoding said second information transmission into a first control signal, said first control signal for	Column 19 lines 60-63. Column 3 lines 6-8.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. Examples of signal words are a string of one or more digital data bits encoded		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. References	Language	References	Support to instant specification filed June 6, 1995. Language
controlling predetermined receiver stations of said plurality of receiver stations by processing locally stored receiver station specific data; and	Column 11 lines 38-43.	<p>together on a single line of video or sequentially in audio.</p> <p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>single line of video or sequentially in audio.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5)</p>
	Column 19 lines 17-23.	<p>... processor or monitor, 12, ... reacts, ... by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p>	

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
	that "Wall Street Week" is being televised on channel X.	<p>and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to</i></p>
		<p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
				view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20. ... to receive the transmission of cable channel 13; to cause said selected recorder, 76 or 78, to turn on and record programming, ...
storing said first control signal from said step of encoding.	Column 11 lines 64-65. Column 16 lines 25-32.	... and instructs the recorder/player, 76 or 78, to turn on and record the programming. One particular advantage of these methods for monitoring programming is that, by locating the identifier signals in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for ...	Page 439 lines 14-15. Page 329 line 15-16. Page 319 lines 23-30.	One particular advantage of these methods for monitoring programming is that, by embedding the SPAM information in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for ...
Dependent Claim 9. The method of claim 8, wherein said first control signal from said step of encoding directs a processor to process	Column 19 lines 60-66.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, ...	Page 25 line 33 to page 26 line 2.. Page 37 line 26 to page 38 line 8.	Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39,

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A		
		44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
	generate several graphic video overlays,the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
	Page 45 lines 7-11.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A

	and to transmit these overlays to TV set, 202, upon command.	Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
supplemental program material and generate a second video image for presented	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 44 lines 14-17. Page 26 lines 20-28.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command ... And the Fig. 1C combining is displayed.
with said one of a first video image and audio, said method further comprising one step of the group consisting of:	Then the host says, "And here is what your portfolio did."	Page 451 line 3. Page 26 lines 8-11.	TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. Then the host says, "And here is what your portfolio did."
storing said supplemental program material in conjunction with said control signal;	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73,	Page 25 lines 33-34. Page 329 line 2-22.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For

Claim Language	References	Language	References	Language
and	<p>Column 19 lines 43-53.</p>	<p>selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>... several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.</p>	<p>Page 21 lines 23-24.</p> <p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>Appendix A</p> <p>example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular programmed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	References	References
Language	Language	Language
		Appendix A
		<p>relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>
	<p>These signals instruct microcomputer, 205, ...</p>	<p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."</p>
	<p>... to generate several graphic video overlays, ...</p>	<p>...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p>
	<p>... which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to ...</p>	<p>Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
References	References	Appendix A
	... transmit these overlays to TV set, 202, ...	composite video and audio transmissions and for presenting a conventional television video image and audio sound. Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
	... upon command.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.
		(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
storing a second control signal in conjunction with said control signal from said step of encoding.	Column 11 lines 57-65.	Page 329 line 2-22.
	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
said second control signal for use at a user station to receive said supplemental program material from a remote transmitter.	<p>Column 4 lines 5-9.</p> <p>These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing, ...</p> <p>Column 3 lines 6-8.</p> <p>Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>Column 19 lines 17-23.</p> <p>... processor or monitor, 12, ... reacts, ... by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.</p> <p>The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.</p> <p>Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands</p>

Claim Language	References	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Support to instant specification filed June 6, 1995.
Language	Language	Language	Language	Language

Appendix A

			<p>Page 435 lines 16-25.</p>	<p>are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p>
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Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Support to instant specification filed June 6, 1995.
References	Language	References	Language
	<p>Column 19 lines 23-27.</p> <p>... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...</p>	<p>Page 439 lines 14-15.</p> <p>Page 437 lines 1-6.</p> <p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p> <p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p>	<p>Appendix A</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>... instructions causes controller, 20, ...; to switch power on to video recorder/player, 217,....</p> <p>... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
	References			References	Language
				Appendix A	
				The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...	
Dependent Claim 10.					
The method of claim 8, wherein said first control signal from said step of encoding directs a processor to generate a video overlay that is coordinated with said first video image	Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	
				Page 25 line 34 to page 26 line 2.	
				Page 37 line 26 to page 38 line 8.	
				Page 26 lines 4-11.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A

				monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And the Fig. 1C combining is displayed.
Dependent Claim 11.			Page 451 line 3.	
The method of claim 8, further comprising the steps of:				
receiving an instruction, said instruction comprising one of the group consisting of:				
	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire....
	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...	Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station; ...

Claim Language	References	Language	References	Language
			Page 59 lines 29-33.	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular predetermined fashion or fashions; to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is</p>
(1) an instruction which is effective at a user station to generate output to be associated with said one of a first video image and audio;	Column 19 lines 63 to column 20 line 2.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	<p>Page 26 lines 1-2.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 26 lines 4-11.</p>	<p>Appendix A</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
(2) an instruction which is effective at a user station to generate output to be associated with a				the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
	Column 19 lines 63 to column 20 line 2.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	<p>Page 451 line 3.</p> <p>Page 26 lines 1-2.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 26 lines 4-11.</p>	<p>And the Fig. 1C combining is displayed.</p> <p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance</p>

Claim Language	References	Language	References	Language
	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.		
References	Language	References	Language	Appendix A
product, service, or information presentation;	Column 20 line 21. Column 19 lines 28-29.	... a printed copy ... and tuner, 215, to tune appropriately to "Wall Street Week."	Page 451 line 3. Page 471 line 8. Page 445 line 35 to page 446 line 1. Page 446 lines 17-21.	overlaid on the studio generated graphic. And the Fig. 1C combining is displayed. ... your own printed copyand to tune monitor, 202M, in a predetermined fashion. In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio And the Fig. 1C combining is displayed.
(3) an instruction which is effective at a user station to present one of a combined and	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
	References	Language	Language
			<p>known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p> <p>Then the host says, "And here is what your portfolio did."</p> <p>TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200.</p>
<p>a sequential presentation of a mass medium program and</p> <p>a user specific datum;</p> <p>(4) an instruction which is effective at a user station to process</p>	<p>Column 19 lines 59-60.</p> <p>Column 19 line 67 to column 20 line 1.</p> <p>Column 20 lines 27-32.</p>	<p>Then the host says, "And here is what your portfolio did."</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p> <p>Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, ...</p>	<p>Page 26 lines 4-11.</p> <p>Page 451 line 3.</p> <p>Page 25 lines 33-34.</p> <p>Page 26 lines 8-11.</p> <p>Page 471 line 26 to page 472 line 17.</p>

Claim Language	References	Language	References	Language
Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A		
a user reaction to said one of a first video image and audio;	Column 20 lines 19-26.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input." The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, to hold and process further ...	Page 471 lines 6-25.	<p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p> <p>Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.</p> <p>Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.</p>
(5) an instruction which is effective at a user station to	Column 13 lines 17-20.	The signals that enable the decrypter/interrupter, 101, to decrypt and/or transfer programming uninterrupted or may be embedded in the programming or may be elsewhere.	Page 291 lines 9-24	<p>In the interval between said commence-enabling time and said 8:30 PM time, said head end is caused, ... to transmit a particular enabling SPAM message that consists of ... enable-CC13 instructions and particular enable-WSW instructions that include particular enable-WSW-programming information, ... on the frequency of said master control channel. (Hereinafter said message is called the "local-cable-enabling-</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A	
	References	Language	References	Language
		<p>message (#7). "</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...</p> <p>In example #7, the controller, 20, of the signal processor, 200, of Fig. 4 is preprogrammed at a particular time with particular information that indicates that the subscriber of said station wishes to view said "Wall Street Week" program when transmission of said program on cable cable 13 commences.</p> <p>particular master cable control channel (that <i>may or may not be cable channel 13</i>) from the multi-channel cable system</p> <p>Executing said 1st-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions, to affect a first stage of decrypting the video information of the "Wall Street Week" program transmission.</p> <p>Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, ...</p> <p>And for example, determining that a local station is not preprogrammed properly and/or that decryption, ... apparatus are not functioning correctly may cause apparatus of said station ... interrogate remote station apparatus, by telephone, for cipher key and/or cipher algorithm instructions and information. And for example, the transmitted programming ...</p>	<p>Page 289 lines 22-27</p> <p>Page 290 lines 28-29</p> <p>Page 298 lines 17-21.</p> <p>Page 299 lines 19-22.</p> <p>Page 311 line 33 to page 312 line 8.</p>	
<p>communicate to a remote station a query in respect of information to one of be associated with said one of a first video image and audio and to enable display of said one of a first video image and audio;</p>	<p>Column 15 lines 20-25.</p>	<p>In any of the cases illustrated in FIGs 4A through 4E, signal processors, 100, 103, 106, 109, and 112, could also operate in a predetermined fashion and telephone a remote site to get an additional signal or signals necessary for the proper decryption and/or transfer of incoming programming transmissions.</p>		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
		Appendix A
(6) an instruction which is effective at a user station to control said user station to	Column 19 lines 63-66. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202.	<p>Page 293 lines 32-35. Page 301 lines 6-9. Page 308 line 35 to page 309 line 3. Page 26 lines 1-8. Page 37 line 26 to page 38 line 8.</p> <p>At each station where a match fails to occur--which suggests that the preprogrammed SPAM operating information of said station has been tampered with in an unauthorized fashion.... ... each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly ... At each station where a ... a match does not result--which indicates that a decryptor, 224 or 231, is not decrypting its received information correctly ... Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred;</p>

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		Language	
				Appendix A	
receive information to supplement said one of a first video image and audio;	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	and to transfer said signals to said apparatus ... And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.	
	Column 19 lines 63-66.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202.	Page 26 lines 1-8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...	
	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated	Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image	

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
		<p>graphic.</p> <p>... processor or monitor, 12, ... reacts, ... by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said</p>	Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
<p>enabling an output device to one of display at least a portion of said one of a first video image and audio and</p>	<p>Column 19 lines 23-29.</p> <p>... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>Page 439 lines 14-15.</p> <p>Page 437 lines 1-6.</p> <p>Page 295 lines 6-8.</p>	<p>Appendix A</p> <p>please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
		Appendix A
	<p>Page 439 lines 9-15.</p> <p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p> <p>Page 445 line 24 to page 446 line 1.</p> <p>Page 445 line 35 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p> <p>Page 25 line 33 to page 26 line 2..</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, ...</p> <p>... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, ...</p> <p>Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...</p> <p>... and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38,</p>
<p>for enabling a processor to process</p>	<p>Column 19 lines 60-66.</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, ...</p>	

Claim Language	References	Language	References	Language
				<p>43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not</p>
executable code;	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	<p>Page 26 lines 4-8.</p> <p>Page 23 line 35 to page 24 line 16.</p> <p>Page 451 lines 7-11.</p>	<p>Appendix A</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
		<p>and to transmit these overlays to TV set, 202,</p> <p>upon command.</p>	<p>one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchronizing command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchronizing command ...</p>
<p>encoding said instruction, said second step of encoding translating said instruction to a second control signal; and</p>	<p>Column 19 lines 60-63.</p>	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.</p>	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synchronizing command. Said second command has a "00"</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
				References	Appendix A
	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	header, an execution segment, and a meter-monitor ...	
storing said second control signal in conjunction with said one of a first video image and audio.	Column 4 lines 5-9.	These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. ...	Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.
	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	
	Column 11 lines 57-65.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 329 line 2-22.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
				or 78, to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.
Dependent Claim 12.				
The method of claim 8, further comprising at least one step from the group consisting of:				
embedding said first control signal in the non-visible portion of a television signal;	Column 4 lines 5-9.	These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing, ...	Page 13 lines 25-28.	The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.
				By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A

			and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	
			<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>In television they may appear on one line in the video portion of the transmission such as line 20 of the vertical interval, or on a portion of one line, or on more than one line, and they will probably lie outside the range of the television picture displayed on a normally tuned television set.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 14 lines 6-11.</p>
embedding code in	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.
said one of a first video image and	Column 2 lines 65-66. Column 4 lines 18-22.	<p>Examples of signal units are a unique code identifying a programming unit,...</p> <p>In television they may appear on one line in the video portion of the transmission, or on a portion of one line, or on more than one line, and will probably lie outside the range of the television picture displayed on a normally tuned television set.</p>	<p>Examples of signal units are a unique code identifying a programming unit,</p> <p>In television they may appear on one line in the video portion of the transmission such as line 20 of the vertical interval, or on a portion of one line, or on more than one line, and they will probably lie outside the range of the television picture displayed on a normally tuned television set.</p>	<p>Page 14 lines 27-29.</p> <p>Page 14 lines 6-11.</p>
audio that	Column 4 lines 22-25.	In television and radio they may appear in a portion of the audio range that is not normally rendered in a form audible to the human ear.	In television and radio they may appear in a portion of the audio range that is not normally rendered in a form audible to the human ear.	Page 14 lines 11-14.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A

enables one of a computer and a controller to	Column 19 lines 17-23.	... processor or monitor, 12, ... reacts, ... by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A

control a presentation of said one of a first video image and audio in accordance with said first control signal;	Column 19 lines 20-29.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 439 lines 14-15. Page 436 line 9 to page 437 line 6.	<p>said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p>
		Then, in a predetermined fashion, microcomputer, 205, may ...		
		... instruct tuner, 214, to switch box, 201, to channel X ...	Page 439 lines 9-15.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	References	Language
		<p>Page 295 lines 6-8.</p> <p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p> <p>Page 445 line 24 to page 446 line 1.</p> <p>Page 445 line 35 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p>	<p>...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p> <p>...instructions causes controller, 20, ...; to switch power on to video recorder/player, 217, ...</p> <p>...controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p> <p>...instructions causes controller, 20, to switch power on to monitor, 202M, ...</p> <p>Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...</p> <p>...and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said</p>
communicating an identification code and storing said identification code at a storage location associated with said one of a first video image and audio; and	Column 11 lines 57-65.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the	<p>Page 329 line 2-22.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
			Appendix A	
		designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.		message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.
	Column 19 lines 43-44.	...instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
	Column 2 lines 65-66.	Examples of signal units are a unique code identifying a programming unit....	Page 14 lines 27-29.	Examples of signal units are a unique code identifying a programming unit,
communicating to and storing at a storage location associated with said one of a first video image and audio a portion of information to	Column 11 lines 57-65.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 329 line 2-22.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
evidence one of an availability, use, and a usage of said one of a first video image and audio at a user station.	Column 19 lines 43-44.	...instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	<p>system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>Examples of signal units are a unique code identifying a programming unit, ...</p> <p>In addition, because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, ...</p> <p>... monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen Company) that collect statistics on viewership and programming usage.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ...</p> <p>Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.</p> <p>Periodically thereafter, said program</p>
	Column 2 lines 65-66.	Examples of signal units are a unique code identifying a programming unit,...	Page 14 lines 27-29.	
	Column 18 lines 29-41.	FIG. 6B also shows signal processor, 200, monitoring for a data gathering and ratings service.	Page 411 lines 10-11.	
		TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...	Page 88 lines 19-22.	
			Page 408 lines 18-29.	
			Page 414 lines 13-27.	

Appendix A

Claim Language	References	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Support to instant specification filed June 6, 1995.
Language	Language	Language	Language	Language
				<p>originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ...</p> <p>Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the</p>
		<p>The processors, 204 and 210, transfer this information to signal processor, 200, ...</p>	<p>Page 15 lines 16-22.</p> <p>Page 36 lines 32-33.</p> <p>Page 38 lines 11-14.</p> <p>Page 411 lines 10-15.</p> <p>Page 418 line 23 to page 419 line 15.</p>	<p>Appendix A</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	References	Language
	<p>... for recording and subsequent transmission to a remote data collection site.</p>	<p>Page 411 line 28 to page 412 line 2.</p> <p>Page 173 line 30 to page 174 line 23 from example #3.</p> <p>Page 419 lines 4-15.</p>	<p>onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in ...</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3).")</p> <p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A

		Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.	Page 28 lines 25-35.	audio program unit of said radio transmission. [Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage. Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...
Independent Claim 13. A method of communicating data	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	Page 324 lines 8-24.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...
	Column 12 lines 58-61.	The facility could also process and transmit radio programming and other electronic data according to the methods described here ...	Page 339 lines 11-23.	... however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		References	
each of which includes		Column 10 lines 24-28.		Page 324 lines 18-21.	
		FIGS. 3A, 3B and 3C illustrates one instance of such use. Figure 3 illustrates the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.		Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.	
to a network of data receiver stations		Column 19 lines 60-63.		Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
	each of which include	Column 10 lines 24-28.		Page 324 lines 18-21.	Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
		Column 17 lines 47-53.		Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
a data receiver,				Page 396 lines 8-10.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
		Column 11 lines 3-5.		Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
			station; ...	
			Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
			Page 397 lines 17-20.	Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above;....
a data storage device,	Column 17 lines 62-64.	Signal processor, 200, is always operating and monitors all incoming channels.	Page 30 lines 7-9 in signal processors 71 and 200.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.
	Column 7 lines 36-37 in signal processors 71 and 200.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion...	Page 36 line 32 to page 37 line 3.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs
a control signal detector,	Column 6 lines 48-50 in signal processors 71 and 200.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1 in signal processors 71 and 200.	This base band signal is then transferred through separate paths to three separate detector devices.
a computer capable of processing said data,	Column 11 lines 15-17.	Cable program controller and computer, 73, is the central automatic control unit for the transmission facility.	Page 326 lines 19-20.	Cable program controller and computer, 73, is the central automatic control unit for the transmission station.
	Column 18 lines 46-48.	... microprocessor, 205, is programmed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 3-6.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	
References	Language	Language	Language
with each of said data receiver stations adapted to detect and respond to at least one control signal	<p>Column 8 lines 58-59.</p> <p>Column 7 lines 50-58.</p>	<p>Control signals can be passed to the apparatus by means of the programming transmissions ...</p> <p>Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.</p> <p>Buffer/comparator, 8, organizes the data stream that it receives according to a pre-determined fashion...</p>	<p>Appendix A</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p>
and to store said data for subsequent processing, and	<p>Column 7 lines 36-37 in signal processors 71 and 200.</p>	<p>Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.</p> <p>Buffer/comparator, 8, organizes the data stream that it receives according to a pre-determined fashion...</p>	<p>Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.</p> <p>Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.</p>
with at least one of said data receiver stations further including a transmitter, said method comprising the steps of:	<p>Column 10 lines 15-20.</p>	<p>The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.</p>	<p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs</p> <p>The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
			Appendix A	
	Column 10 lines 43-47.	...and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92. At this point, an instruction signal is generated in the television studio originating the programming ...	Page 325 lines 1-4.	operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. ...apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92. A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
receiving said data to be transmitted from at least one origination station;	Column 19 lines 60-62.		Page 59 lines 29-33.	At this point, an instruction signal is generated at said program originating studio, ... The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.
	And, for example, Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 25 lines 34-35. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
	Or Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.	The present invention employs signals embedded in programming.

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		References	
		Language		Language	
receiving said at least one control signal to be transmitted from said at least one origination station,	Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...		Page 59 lines 29-33.	Appendix A A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. At this point, an instruction signal is generated at said program originating studio, ...
	And, for example, Column 2 lines 63-66.	... one complete signal instruction or information message unit. Examples ... are a unique code identifying a programming unit, or a ...		Page 25 lines 34-35. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	
wherein said at least one control signal is effective in said network to control a first of said data receiver stations to transmit said data and	Or Column 15 lines 63-65.	In the case of data transmitted to the micro- computer, they may be unique codes that identify the source and suppliers of the data.		Page 14 lines 26-29.	... one complete signal instruction or information message unit. Examples ... are a unique code identifying a programming unit, or a ... Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:.... ...unique codes that identify the sources and suppliers of computer data.
	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.		Page 49 lines 26-28. Page 50 lines 19-20. Page 327 line 35 to page 328 line 13.	
					Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor

Claim Language	References	Language	References	Support to instant specification filed June 6, 1995. Language
transmitting an information transmission from said at least one origination station comprising said	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	Appendix A A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ... When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ... Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal
received data and said received at least one control signal.	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...	Page 25 line 34 to page 26 line 1. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. Page 451 lines 6-7. Page 23 line 35 to page 24 line 4. Page 37 line 26 to page 38 line 8.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Support to instant specification filed June 6, 1995.
	Language	Language	Language
			<p>information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>
Dependent			

Appendix A

Claim Language	References	Language	References	Language
	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	Appendix A
<p>Claim 14.</p> <p>The method of claim 13, wherein said data is contained in a television signal in which is embedded one of (i) identification data and</p>	<p>Column 11 lines 38-43.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution</p>
(ii) said at least one control signal is	<p>Column 11 lines 38-43:</p>	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 327 line 35 to page 328 line 13.</p>	

Claim Language	References	Language	References	Language
				<p>amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>The present invention employs signals embedded in programming.</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47,</p>
			<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 13 lines 25-26.</p> <p>Page 21 lines 23-24.</p> <p>Page 45, lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p> <p>Page 37 line 26 to page</p>	<p>Appendix A</p>
<p>embedded in a television signal containing</p> <p>said data.</p>	<p>Column 4 lines 5-6.</p> <p>Column 19 lines 43-44.</p> <p>Column 19 lines 45-49.</p>	<p>These techniques employ signals embedded in programs.</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...</p>		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	
References	Language	Language	References
		Appendix A	
		television or radio or other programming transmissions....	... monitor information that identifies what programming is available, ...
		Meter-monitor segments contain meter information and/or monitor information.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...
	Column 19 lines 17-23.	... processor or monitor, 12, ... reacts, ... by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
		Page 28 lines 26-27.	Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...
		Page 49 lines 26-27.	Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects</i>
		Page 435 lines 16-18.	Page 436 line 9 to page 437 line 3.
		Page 267 lines 20-28 from example #5.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
			<p><i>the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i></p> <p>Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p>
<p>Dependent Claim 16.</p> <p>The method of claim 13, wherein said control signal is for controlling each of said data receiver stations at a different time.</p>	<p>Column 11 lines 38-43.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in</p>
	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Page 439 lines 14-15.</p>	<p>Page 84 lines 26-28.</p>

Claim Language	References	Language	References	Language	Support to instant specification filed June 6, 1995.
				Appendix A	
		<p>... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>television or radio or other programming transmissions...</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions</p>	
	<p>Column 11 lines 50-57.</p>	<p>... processor or monitor, 12, ... reacts, ... by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p>		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
			Page 436 line 9 to page 437 line 3.	Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. ... to receive the transmission of cable channel 13; ...
			Page 439 lines 14-15.	
Dependent Claim 17. The method of claim 13, further comprising the steps of receiving said data at a	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60 , and other means, 62 . They are fed along the conventional	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53,

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Language	References	Support to instant specification filed June 6, 1995.	Language
<p>receiver,</p> <p>communicating said data from said receiver to a memory location, and</p>	<p>Column 11 lines 57-64.</p>	<p>paths described above.</p> <p>Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...</p>	<p>Page 329 line 2-20.</p>	<p>54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...</p> <p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.</p>	<p>Appendix A</p>
<p>storing said data at said memory location for a period of time prior to</p>	<p>Column 11 lines 64-65.</p>	<p>... and instructs the recorder/player, 76 or 78, to turn on and record the programming.</p>	<p>Page 329 line 15-16.</p>	<p>... to cause said selected recorder, 76 or 78, to turn on and record programming, ...</p>	

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
		References	Language
		References	Language
communicating said data to said transmitter.	Column 11 lines 57-60.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission,...	Page 329 line 2-20. Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information. ... Receiving said message causes computer, 73, to determine, ... that said "code" information matches ... schedule information of programming that is scheduled to be ... transmitted to the field system, 93, at a later time. So determining causes computer, 73, ... to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
	Column 11 lines 44-46.	Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.	Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78,
	Column 10 lines 49-52.	When played on video recorder and players, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted to the field.	When played on video recorders, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted via switch 75 to field distribution system, 93.
Independent Claim 18. A method of communicating mass medium programming	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
References	References	References
<p>to a network of programming receiver stations</p> <p>each of which includes</p>	<p>Column 19 lines 60-63.</p> <p>Column 10 lines 24-28.</p> <p>Column 17 lines 47-53.</p>	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.</p> <p>FIGS. 3A, 3B and 3C illustrates one instance of such use. Figure 3 illustrates the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.</p> <p>FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.</p>
<p>Page 59 lines 29-33.</p> <p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7.</p> <p>Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 324 lines 18-21.</p> <p>Page 390 lines 30-35.</p>	<p>medium programming ...</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.</p> <p>Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.</p>	<p>Appendix A</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
a programming receiver,	Column 10 lines 30-39.	The facility receives programing from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programing input means, 62, can receive programming transmissions.	Page 324 lines 23-31.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.
	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
	Column 10 lines 43-47.	...and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
an output device,	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to	Page 325 lines 1-4.	...apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.
			Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
a control signal detector,	<p data-bbox="191 1203 215 1419">"Wall Street Week."</p> <p data-bbox="667 1465 691 1696">Column 11 lines 3-5.</p> <p data-bbox="667 978 781 1419">Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...</p> <p data-bbox="1287 1440 1312 1696">Column 17 lines 62-64.</p>	<p data-bbox="191 170 402 674">of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p data-bbox="431 212 602 674">In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p data-bbox="667 170 1016 674">At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....</p> <p data-bbox="1049 730 1073 957">Page 59 lines 29-33.</p> <p data-bbox="1049 170 1252 674">A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p data-bbox="1287 170 1432 674">Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above;....</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	References	Language
stations adapted to detect and respond to at least one control signal, and	<p>Column 11 lines 3-5.</p> <p>Column 19 lines 17-23.</p>	<p>and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a predetermined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.</p> <p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, ...</p> <p>... processor or monitor, 12, ... reacts, ... by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 325 line 34 to page 326 line 10.</p> <p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p>	<p>analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.</p> <p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station; automatically adds, in a predetermined fashion, source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, ...</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they</p>	Appendix A	

Claim Language	References	Language	References	Support to instant specification filed June 6, 1995. Language
<p>with at least one of said programming receiver stations further including a transmitter, said method comprising the steps of:</p>	<p>Column 10 lines 15-20.</p>	<p>The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.</p>	<p>Page 436 line 9 to page 437 line 3.</p>	<p>can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio,</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
receiving mass medium programming to be transmitted from an origination station;	Column 10 lines 43-47.	...and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	Page 325 lines 1-4.	print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. ...apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.
	Column 19 lines 60-62. Column 19 line 53-56.	At this point ... in the television studio originating the programming ... Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 34-35. Page 25 lines 26-33.	At this point, ... at said program originating studio, ... During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
receiving said at least one control signal to be transmitted from said origination station,	Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
			Page 25 lines 34-35. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See	At this point, an instruction signal is generated at said program originating studio, ... The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
			URS microcomputers, 205.	
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available,.... Meter-monitor segments contain meter information and/or monitor information.
			Page 84 lines 26-28.	
			Page 28 lines 26-27.	
			Page 49 lines 26-27.	
wherein said at least one control signal is effective in said network to control a	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network,	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information,

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	
References	Language	References	Language
<p>first of said programming receiver stations to transmit said mass medium programming and</p>	<p>98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p> <p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p> <p>Column 11 lines 50-57.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>Appendix A</p> <p>received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so</p>

Claim Language	References	Language	References	Support to instant specification filed June 6, 1995. Language
to control a second of said programming receiver stations to identify and	Column 4 lines 5-9.	These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing, ...	Page 13 lines 25-28.	<p>as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is</p>
	Column 19 lines 17-23.	... processor or monitor, 12, ... reacts, ... by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-18. Page 267 lines 20-28 from example #5.	
			Page 436 line 9 to page 437 line 3.	

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Support to instant specification filed June 6, 1995.
	Language	Language	Language
<p>process at least a portion of said transmitted mass medium programming; and</p>	<p>Column 19 lines 23-29.</p> <p>... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>Page 439 lines 14-15.</p> <p>Page 437 lines 1-6.</p> <p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p>	<p>Appendix A</p> <p>preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>... instructions causes controller, 20, ... to</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
			Page 445 lines 24-27.	switch power on to video recorder/player, 217, ...
			Page 446 lines 18-23.	... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
			Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, ...
			Page 445 line 35 to page 446 line 1.	Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...
			Page 446 lines 17-21.	... and to tune monitor, 202M, in a predetermined fashion.
			Page 451 lines 6-7.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
			Page 23 line 35 to page 24 line 4.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
			Page 37 line 26 to page 38 line 8.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
				In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a

Appendix A

Claim Language	References	Language	References	Support to instant specification filed June 6, 1995. Language
			<p>Page 24 lines 5-6.</p> <p>Page 451 lines 7-9.</p>	<p>predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...</p>
transmitting an information transmission from said origination station comprising said	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	<p>Page 59 lines 29-33.</p> <p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7.</p> <p>Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 25 lines 26-33.</p>	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p>
received mass medium programming and	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.		<p>During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated</p>

Appendix A

Claim Language	References	Language	References	Support to instant specification filed June 6, 1995. Language
said received at least one control signal.	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	<p>graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions...</p> <p>...monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>
Dependent Claim 19. The method of claim 18, wherein said mass medium programming is			Page 28 lines 26-27. Page 49 lines 26-27.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
contained in a mass medium program signal in which is embedded one of (i) identification data and (ii) said at least one control signal.				
Dependent Claim 20.				
The method of claim 18, wherein two of said receiver stations store said at least one control signal concurrently.				
Dependent Claim 21.				
The method of claim 18, wherein said control signal is for controlling each of said programming receiver stations at a different time.	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming
			Page 84 lines 26-28.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
			transmissions....	... monitor information that identifies what programming is available, ...
				Meter-monitor segments contain meter information and/or monitor information.
				For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
				In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...
				All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station
			Page 28 lines 26-27.	
			Page 49 lines 26-27.	
			Page 328 line 22 to page 329 line 1.	
				... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.
				... processor or monitor, 12, ... reacts, ... by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.
			Page 435 lines 16-18.	
			Page 267 lines 20-28 from example #5.	
			Column 11 lines 50-57.	
			Column 19 lines 17-23.	

Claim Language	References	Language	References	Support to instant specification filed June 6, 1995.
Language	Language	Language	Language	Language
			<p>Page 436 line 9 to page 437 line 3.</p>	<p>Appendix A</p> <p>receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p>
Dependent Claim 22.			<p>Page 439 lines 14-15.</p>	
The method of claim 18, further comprising the steps of	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means,	<p>Page 324 lines 23-33.</p>	<p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
receiving said mass medium programming at a receiver in a transmitter station,	62. They are fed along the conventional paths described above.	amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
communicating said mass medium programming from said receiver to a memory location, and	Column 11 lines 57-64.	<p>Page 329 line 2-20.</p> <p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.</p>
storing said mass medium programming at said memory location for a period of time	Column 11 lines 64-65.	<p>Page 329 line 15-16.</p> <p>... to cause said selected recorder, 76 or 78, to turn on and record programming, ...</p>

Appendix A

Claim Language	References	Language	References	Language
<p>prior to communicating said mass medium programming to said transmitter.</p>	<p>Column 11 lines 57-60.</p>	<p>Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission,...</p>	<p>Page 329 line 2-20.</p>	<p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information. ... Receiving said message causes computer, 73, to determine, ... that said "code" information matches ... schedule information of programming that is scheduled to be ... transmitted to the field system, 93, at a later time. So determining causes computer, 73, ... to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.</p>
<p>Independent Claim 23. A method of controlling a network of receiver stations each of which includes</p>	<p>Column 11 lines 44-46. Column 10 lines 49-52.</p>	<p>Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.</p> <p>When played on video recorder and players, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted to the field.</p>	<p>Page 328 lines 14-16. Page 325 lines 6-9.</p>	<p>Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78,</p> <p>When played on video recorders, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted via switch 75 to field distribution system, 93.</p>
	<p>Column 19 lines 60-63.</p>	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.</p>	<p>Page 59 lines 29-33.</p>	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
			transmitted SPAM messages. At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...	
	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	Page 25 line 34 to page 26 line 1. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. Page 324 lines 8-24.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...
	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
a signal receiver,	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from	Page 396 lines 8-10. Page 325 line 34 to page 326 line 7.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples. At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier,

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	References	Language
			their associated programming and...			Appendix A 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station; ... A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
a signal detector,	Column 17 lines 62-64.	Signal processor, 200, is always operating and monitors all incoming channels.		Page 59 lines 29-33.		Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above;.... This base band signal is then transferred through separate paths to three separate detector devices.
said signal detector adapted to receive signals from an information transmission,	Column 6 lines 48-50.	As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.		Page 34 line 35 to page 35 line 1.		The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.
and a processor programmed to	Column 8 lines 20-27.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing		Page 29 lines 11-15.		Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		References	
		Language		Language	
<p>respond to signals from said signal detector,</p> <p>with at least one of said receiver stations further including a transmitter, said method comprising the steps of:</p>	Column 7 lines 50-54.	<p>device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.</p> <p>Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both.</p> <p>...and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.</p>	<p>Page 31 lines 10-14.</p> <p>Page 325 lines 1-4.</p>	<p>a telephone unit, 22. ... Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...</p> <p>Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both.</p> <p>...apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.</p>	Appendix A
	Column 10 lines 43-47.	<p>At this point, an instruction signal is generated in the television studio originating the programming ...</p>	Page 59 lines 29-33.	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, ...</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.</p>	
receiving at least one control signal to be transmitted from an origination station,	Column 19 lines 60-62.	By comparing identification signals on the incoming programming...	Column 11 lines 38-39.	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Support to instant specification filed June 6, 1995.
Language	Language	References	Language
			<p>information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>...monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially</p>
		<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 267 lines 20-28 from example #5.</p>	<p>Appendix A</p>
<p>Column 19 lines 20-23.</p>	<p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>		

Claim Language	References	Language	References	Language
			<p>Page 436 line 9 to page 437 line 3.</p>	<p>Appendix A</p> <p>all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CCI3-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CCI3-at-particular-8:30 information to the controller, 20.</p>

Claim Language	References	Language	References	Support to instant specification filed June 6, 1995. Language
<p>said at least one control signal effective in said network to control a first of said receiver stations to transmit said information transmission and to</p>	<p>Column 11 lines 50-57.</p>	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 439 lines 14-15.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>...to receive the transmission of cable channel 13;...</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
<p>control a second of said receiver stations to identify and</p>	<p>Column 19 lines 20-25.</p>	<p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...</p>	<p>Page 267 lines 20-28 from example #5.</p>	<p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) By contrast, the...</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance</p>

Claim Language	References	Language	References	Support to instant specification filed June 6, 1995. Language
			<p>Page 436 line 9 to page 437 line 6.</p>	<p>of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ... Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Language	Language	Language
<p>process at least a portion of said transmitted information transmission;</p>	<p>Column 19 lines 23-29.</p> <p>... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>Appendix A</p> <p>apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its</p> <p>...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>... instructions causes controller, 20, ... to switch power on to video recorder/player, 217,</p> <p>...</p> <p>... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p> <p>... instructions causes controller, 20, to switch</p> <p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p> <p>Page 437 lines 1-6.</p> <p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p> <p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p> <p>Page 445 line 24 to</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
		<p>page 446 line 1.</p> <p>Page 445 line 35 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p> <p>Page 21 lines 23-24.</p> <p>Page 26 lines 1-2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...</p> <p>... and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p>
receiving at least one designation signal to be transmitted from said origination station,	Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...	

Appendix A

Claim Language	References	Language	References	Support to instant specification filed June 6, 1995. Language
<p>said at least one designation signal designating</p> <p>at least one receiver station of said network of receiver stations to which said at least one control signal is addressed; and</p>	<p>Column 7 lines 50-58.</p> <p>Column 11 lines 3-5.</p>	<p>Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.</p> <p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, ...</p>	<p>Page 25 lines 34-35.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 31 lines 10-18.</p> <p>Page 325 line 34 to page 326 line 10.</p>	<p>Appendix A</p> <p>At this point, an instruction signal is generated at said program originating studio, ...</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.</p> <p>Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.</p> <p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station; automatically adds, in a predetermined fashion, source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, ...</p>

Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
Claim Language	References	Language	References
transmitting said information from said origination station, said information transmission comprising	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33. Page 25 line 34 to page 26 line 1. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.
said received at least one control signal and	Column 11 lines 38-57.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming. Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78. If incoming programming is meant for immediate transmission, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer incoming programming to the proper output channel. For example, if controller/computer, 73, determines that programming incoming via	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.

Appendix A

Claim Language	References	Language	References	Support to instant specification filed June 6, 1995. Language
		<p>receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 14 to page 329 line 1.</p>	<p>Appendix A</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, and can cause selected programming to be transmitted to field distribution system, 93, or recorded.</p> <p>Determining that particular incoming programming is scheduled for immediate retransmission can cause computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer said incoming programming to a scheduled output channel. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	References	Language
References	Language	Language	References	Language
	<p>Column 19 lines 20-25.</p> <p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...</p>		<p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) By contrast, the...</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable- WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ...</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	
References	Language	References	Language
			<p>Appendix A</p> <p>program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13, ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... ..</p> <p>...to cause selected apparatus of said</p>
		Page 439 lines 14-15.	
		Page 437 lines 1-6.	
		Page 439 lines 9-15.	
		Page 295 lines 6-8.	
		Page 439 lines 9-15.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
	<p>Column 7 lines 50-58.</p> <p>Column 11 lines 3-5.</p>	<p>Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.</p> <p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, ...</p>	<p>Page 31 lines 10-18.</p> <p>Page 325 line 34 to page 326 line 10.</p>	<p>station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.</p> <p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station; automatically adds, in a predetermined fashion, source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, ...</p>	<p>Appendix A</p>
<p>Dependent Claim 24.</p> <p>The method of claim 23, wherein a portion of one of said at least one control signal and said at least one designation signal is</p>	<p>Column 4 lines 5-6.</p> <p>Column 19 lines 43-44.</p>	<p>These techniques employ signals embedded in programs.</p> <p>...instruction signals embedded in the "Wall Street Week" programming transmission.</p>	<p>Page 13 lines 25-26.</p> <p>Page 21 lines 23-24.</p>	<p>The present invention employs signals embedded in programming.</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p>	

Claim Language	References	Language	References	Language
		<p>a portion of one line, or on more than one line, and will probably lie outside the range of the television picture displayed on a normally tuned television set.</p> <p>...signal processor, 200, to hold examples of the sought for unique signals in its buffer/ comparator, 8, and compare them with all incoming signals.</p> <p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 420 lines 6-20.</p> <p>Page 422 lines 33 to Page 423 line 4.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25.</p>	<p>Appendix A</p> <p>line 20 of the vertical interval, or on a portion of one line, or on more than one line, and they will probably lie outside the range of the television picture displayed on a normally tuned television set.</p> <p>The signal processor, 200, of said station is preprogrammed ... with particular news-items-of-interest information that includes identification information of the particular stocks in said portfolio....</p> <p>One company whose stock is preprogrammed at said microprocessor, 205, is the American Telephone and Telegraph Company whose stock is identified by particular binary information of "T". And among the news-items-of-interest information at said RAM is an instance of said binary information of "T".</p> <p>...said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information....</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially</p>

Claim Language	References	Language	References	Language
			<p>Page 436 line 9 to page 437 line 3.</p>	<p>Appendix A</p> <p>all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
Independent Claim 25. A method of processing signals in a communications network, said communications network having			Page 439 lines 14-15.	...to receive the transmission of cable channel 13;...
	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	Page 324 lines 8-24.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...
	Column 16 lines 32-35.	For example, a person might instruct video cassette recorder, 135, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.	Page 319 lines 30-33.	For example, a subscriber might instruct video recorder/player, 217, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.
at least one transmitter station and	Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrates one instance of such use. Figure 3 illustrates the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.	Page 324 lines 18-21.	Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
at least one receiver station, said method comprising the steps of:	Column 15 lines 27-30.	FIG 5 illustrates methods for monitoring reception and operation which methods can be used to gather statistics on programming usage and associated uses of other data transmissions and equipment.	Page 312 line 33 to page 313 line 8.	Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local apparatus receives programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing ...
			Page 28 lines 25-29.	[Signal processor 200 in Fig. 7 and elsewhere]

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
		References		Language	
		References		Language	
Appendix A					
inputting a signal and	Column 10 lines 61-64.	Incoming programing transmissions are received at the relevant receiver points, antennas, 50, 57, and 60 , and other means, 62 . They are fed along the conventional paths described above.	Page 324 lines 23-33.	has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...	
a transmission schedule associated with said signal, said schedule comprising at least one of:	Column 11 lines 21-22.	Such input information might include the cable television system's complete programming schedule,...	Page 326 lines 30-31.	Such input information can include the complete programming schedule of the station of Fig. 6,....	
(1) a time at which to transmit said signal; and	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93 .	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit,....	
(2) one of a frequency and an output network on which to transmit said signal;	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93 .	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit,....	
	Column 6 lines 26-30.	As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire	Page 29 lines 11-15.	The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
transmitting said signal according to said schedule;		range of broadcast television transmissions available to a local television antenna of conventional design.		television transmissions available to a local television antenna of conventional design.
	Column 11 lines 39-43.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 328 lines 9-13. Page 326 lines 28-30.	... said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. ... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
selecting at least a portion of information communicated one of to a transmitter and	Column 11 lines 3-7.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, along with information identifying the channel source of each signal, externally to code reader, 72.	Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	References	Language	Language
<p>from a transmitter; and</p>	<p>Column 10 lines 30-47.</p>	<p>The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions. All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.</p> <p>Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and</p>	<p>Appendix A</p> <p>distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addressed to ITS apparatus of said intermediate transmission station; ...</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire to a conventional matrix switch, 75, well known in the art, that outputs to one or more recorder/players, 76 and 78, and/or to apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.</p> <p>Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field</p>
	<p>Column 12 lines 45-50.</p>	<p>Page 59 lines 29-33.</p> <p>Page 324 line 23 to page 325 line 4.</p> <p>Page 337 lines 1-12.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
		Appendix A
<p>comparing said at least a portion of information to a portion of said schedule, thereby to determine proper transmission of said signal according to said schedule;</p>	<p>Column 11 lines 32-43.</p>	<p>signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93.</p>
	<p>By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75.</p> <p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5.</p>
	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
	<p>Page 84 lines 26-28.</p>	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p>
	<p>Page 28 lines 26-27.</p>	<p>... monitor information that identifies what programming is available, ...</p>

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		References	
				Language	
				Appendix A	
wherein said method processes signals in said communications network.	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.	
	Column 16 lines 32-35.	For example, a person might instruct video cassette recorder, 135, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.	Page 324 lines 8-24.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...	
			Page 319 lines 30-33.	For example, a subscriber might instruct video recorder/player, 217, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.	
Independent Claim 26.					
A method of transmitting signals in a network, said network having	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	Page 324 lines 8-24.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...	
	Column 16 lines 32-35.	For example, a person might instruct video cassette recorder, 135, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.	Page 319 lines 30-33.	For example, a subscriber might instruct video recorder/player, 217, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.	
	Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrates one instance of such use. Figure 3 illustrates the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.	Page 324 lines 18-21.	Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.	
a transmitter station and					
a receiver station, said	Column 15 lines 27-30.	FIG 5 illustrates methods for monitoring	Page 312 line 33 to	Fig. 5 illustrates means and methods for	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
method comprising the steps of:		reception and operation which methods can be used to gather statistics on programming usage and associated uses of other data transmissions and equipment.	page 313 line 8.	monitoring receiver station reception and use of programming ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local apparatus receives programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing ...
inputting a signal and	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
a transmission schedule associated with said signal, said schedule including at least one of:	Column 11 lines 21-22.	Such input information might include the cable television system's complete programming schedule,...	Page 326 lines 30-31.	Such input information can include the complete programming schedule of the station of Fig. 6,....
(1) a time at which to transmit said signal; and	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit,....
(2) one of a frequency and an output network on which to transmit said signal;	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit,....

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
transmitting said signal according to said schedule;	<p>Column 11 lines 39-43.</p> <p>... the programing schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p> <p>... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p> <p>Column 11 lines 50-57.</p>	<p>Page 328 lines 9-13.</p> <p>... said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>Page 326 lines 28-30.</p> <p>Page 328 line 22 to page 329 line 1.</p>
selecting a portion of said signal; and	<p>Column 11 lines 3-7.</p> <p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, along with information identifying the channel source of each signal, externally to code reader, 72.</p>	<p>Page 325 line 34 to page 326 line 7.</p> <p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS</p>

Appendix A

Claim Language	References	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Support to instant specification filed June 6, 1995.
Claim Language	References	Language	Language	Language
				Appendix A
comparing said selected portion of said signal to information stored in said network; and	Column 11 lines 32-41.		Page 59 lines 29-33.	<p>apparatus of said intermediate transmission station; ...</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p>
	<p>By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75.</p> <p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, ...</p>	<p>Page 327 line 35 to page 328 line 13.</p>		<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
			Page 84 lines 26-28.	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p>
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
<p>determining one of a transmission time and</p> <p>a transmission location of said signal.</p>	<p>Column 11 lines 41-43.</p>	<p>...controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Appendix A</p> <p>... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.</p> <p>...computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming ...</p> <p>...computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming ...</p> <p>Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.</p>
	<p>Column 11 lines 41-43.</p>	<p>...controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	
	<p>Column 12 lines 45-53.</p>	<p>Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
Dependent Claim 27. The method of claim 3, wherein said control signal is for controlling said first of said plurality of receiver stations to compare said information transmission to a programming schedule and to	Column 11 lines 32-39.	By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75. By comparing identification signals on the incoming programming with the programming schedule ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
transmit said information transmission according to said programming schedule.	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the	Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
			Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has

Claim Language	References	Language	References	Language
		Appendix A		Support to instant specification filed June 6, 1995.
				Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.
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Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
				matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
Dependent Claim 28.				
The method of claim 3, wherein said control signal is for controlling transmission of said information to a programming schedule and	Column 4 lines 5-9. Column 11 lines 38-43.	<p>These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing, ...</p> <p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	Page 13 lines 25-28. Page 327 line 35 to page 328 line 13.	<p>The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
	Column 11 lines 50-57.	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted</p>	Page 84 lines 26-28. Page 28 lines 26-27.	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions. ...</p> <p>... monitor information that identifies what programming is available, ...</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Language	Language	Language
<p>logging of transmission of said information transmission.</p>	<p>Column 12 lines 45-53.</p> <p>Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs.</p>	<p>from TV receiver, 53, to the output that leads to modulator, 87.</p>
		<p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p> <p>Page 337 lines 1-19.</p>
		<p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogramming schedule information of preprogramming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
				unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.
Dependent Claim 29.				
The method of claim 3, wherein said control signal is for controlling transmission of said information to a programming schedule and				The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.
	Column 4 lines 5-9.	These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. ...	Page 13 lines 25-28.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in

Claim Language	References	Language	References	Support to instant specification filed June 6, 1995. Language
	<p>Column 11 lines 50-57.</p>	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
<p>generation of statistics pertaining to said information transmission.</p>	<p>Column 15 lines 27-30.</p>	<p>FIG 5 illustrates methods for monitoring reception and operation which methods can be used to gather statistics on programming usage and associated uses of other data transmissions and equipment.</p>	<p>Page 312 line 33 to page 313 line 8.</p>	<p>Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local apparatus receives programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	References	References
Language	Language	Language
	<p>Column 18 lines 29-41.</p>	<p>Appendix A</p> <p>Page 28 lines 25-29.</p> <p>Page 411 lines 10-11.</p> <p>Page 88 lines 19-22.</p> <p>Page 408 lines 18-29.</p> <p>Page 414 lines 13-27.</p> <p>Page 15 lines 16-22.</p>
	<p>FIG. 6B also shows signal processor, 200, monitoring for a data gathering and ratings service.</p> <p>TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...</p>	<p>[Signal processor 200 in Fig. 7 and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage.</p> <p>In addition, because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, ...</p> <p>... monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen Company) that collect statistics on viewership and programming usage.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ...</p> <p>Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above escribed fashion.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ...</p> <p>Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	References	References
Language	Language	Language
		<p>Appendix A</p> <p>input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus. ... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause</p>
	<p>The processors, 204 and 210, transfer this information to signal processor, 200, ...</p>	<p>Page 36 lines 32-33.</p> <p>Page 38 lines 11-14.</p> <p>Page 411 lines 10-15.</p> <p>Page 418 line 23 to page 419 line 15.</p> <p>Page 411 line 28 to page 412 line 2.</p>
	<p>... for recording and subsequent transmission to a remote data collection</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
			Appendix A	
	site.		a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in ...	
			The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1 st monitor information (#3).")	
			In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.	
			[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote	
	Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.		Page 173 line 30 to page 174 line 23 from example #3.	
			Page 419 lines 4-15.	
			Page 28 lines 25-35.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	
References	Language	References	Language
<p>Dependent Claim 30.</p> <p>The method of claim 3, wherein said control signal is for controlling transmission of said information to a programming schedule and</p>			<p>Appendix A</p> <p>so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...</p> <p>The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate</p>
	<p>Column 4 lines 5-9.</p> <p>Column 11 lines 38-43.</p>	<p>Page 397 lines 17-20.</p> <p>Page 13 lines 25-28.</p> <p>Page 327 line 35 to page 328 line 13.</p> <p>Page 84 lines 26-28.</p>	
	<p>These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing, ...</p> <p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>		

Claim Language	References	Language	References	Language
Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Appendix A			
		<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87,</p> <p>Column 11 lines 50-57.</p>	<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.</p> <p>Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and</p>
<p>identification of content of said information transmission.</p>	<p>Column 15 lines 57-62.</p>	<p>The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.</p>	<p>Page 315 lines 20-24.</p> <p>Page 44 lines 26-32.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	
References	References	References	Language
			Appendix A
<p>Independent Claim 31.</p> <p>A method of processing a signal in a system comprising</p>			<p>the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.</p> <p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <ul style="list-style-type: none"> ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ...
<p>a transmitter station and</p>	<p>Column 10 lines 15-23.</p>	<p>The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.</p>	<p>Page 49 line 26 to Page 50 line 4.</p>
<p>a receiver station, said method comprising the steps of:</p>	<p>Column 10 lines 24-28.</p>	<p>FIGS. 3A, 3B and 3C illustrates one instance of such use. Figure 3 illustrates the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.</p>	<p>Page 324 lines 8-24.</p> <p>The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...</p> <p>Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.</p> <p>Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Language	Language	Language
Appendix A		
	other data transmissions and equipment.	the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local apparatus receives programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing ...
inputting to said transmitter station said signal and	Column 10 lines 61-64.	Page 324 lines 23-33.
a transmission schedule associated with said signal, said signal including a first identifier,	Column 11 lines 21-22. Column 11 lines 38-39.	<p>Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.</p> <p>Such input information might include the cable television system's complete programming schedule,...</p> <p>By comparing identification signals on the incoming programming ...</p> <p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...</p> <p>Such input information can include the complete programming schedule of the station of Fig. 6,....</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74,</p>

Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
Claim Language	References	Language	References
		Appendix A	
		and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	
		SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions	Page 84 lines 26-28.
		... monitor information that identifies what programming is available,....	Page 28 lines 26-27.
		Meter-monitor segments contain meter information and/or monitor information.	Page 49 lines 26-27.
		Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information.	Page 326 lines 30-33.
said schedule including a second identifier and at least one of:	Column 11 lines 21-24.	Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code...	
(1) a time at which to transmit said signal; and	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 33 to page 327 line 2.
(2) one of a frequency and an output network on which to transmit said signal;	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 33 to page 327 line 2.
	Column 6 lines 26-30.	As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.	Page 29 lines 11-15.
comparing said first identifier and said	Column 11 lines 38-39.	By comparing identification signals on the incoming programming with the programming	Page 327 line 35 to page 328 line 13.
		Computer, 73, monitors incoming programming by means of the aforementioned	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. References	Language	Support to instant specification filed June 6, 1995. References	Language
second identifier;		schedule ...		<p>dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
transmitting said signal to said receiver station according to said schedule based on said step of comparing;	Column 11 lines 38-57.	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p> <p>Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78. If incoming programming is meant for immediate</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 327 line 35 to page 328 line 13.</p>	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
	<p>transmission, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer incoming programming to the proper output channel. For example, if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>...monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, and can cause selected programming to be transmitted to field distribution system, 93, or recorded.</p> <p>Determining that particular incoming programming is scheduled for immediate retransmission can cause computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer said incoming programming to a scheduled output channel. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel</p>
		<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 14 to page 329 line 1.</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
selecting a portion of said signal at said receiver station; and	Column 16 lines 5-11.	For example, TV set, 131, may receive programming from many sources including cable converter box, 133, video cassette recorder, 135, and videodisc player, 137. In every programming unit played on TV set, 132, TV decoder, 131, receives every signal for which it is instructed to search in a predetermined fashion and transfers the signals to signal processor, 130, ...	Page 313 lines 16-23.	modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. Fig. 5 shows a variety of input apparatus with capacity for inputting programming (including SPAM information) selectively, via matrix switch, 258, to apparatus of the subscriber station of Fig. 5, intermediate apparatus with capacity for processing and/or recording inputted programming selectively, and output apparatus for displaying or otherwise outputting programming selectively to human senses. Associated with each intermediate apparatus and output apparatus is one or more appropriate decoders. ... At TV tuner, 215, is TV decoder, 282. ... At TV monitor, 202M, is TV decoder, 145. Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.
inputting said selected portion of said signal to a processor for	Column 16 lines 10-11.	...transfers the signals to signal processor, 130,...	Page 315 lines 6-8. Page 315 lines 20-24.	Fig. 5 shows each decoder as having capacity for transferring monitor information to signal processor, 200, by bus communications means. Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		References	
Language		Language		Language	
gathering statistics on programming availability, use or usage.	Column 15 lines 27-30.	FIG 5 illustrates methods for monitoring reception and operation which methods can be used to gather statistics on programing usage and associated uses of other data transmissions and equipment.	Page 312 line 33 to page 313 line 8.	transmission to which its associated apparatus is tuned.	
	Column 18 lines 38-41.	Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programing availability to record and transmit to a remote site.	Page 28 lines 25-35.	Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local apparatus receives programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing	
				[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.	
Dependent Claim 32.					
The method of claim 3, wherein said control signal is for controlling transmission of said information to a programming schedule and	Column 4 lines 5-9.	These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing, ...	Page 13 lines 25-28.	The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.	
	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input,	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system,	

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
	Language	Language
	<p>74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion,</p>
		<p>Page 84 lines 26-28.</p>
		<p>Page 28 lines 26-27.</p>
		<p>Page 49 lines 26-27.</p>
<p>Column 11 lines 50-57.</p>	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 328 line 22 to page 329 line 1.</p>

Appendix A

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
		References	Language	References	Language
output of an identifier of said information transmission to a remote data collection station.		Column 12 lines 45-56.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs. Signal processors, 71 and 96, can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively.	Page 337 lines 1-21.	so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
					Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs. And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.
Dependent Claim 33.					
The method of claim 3, wherein said	Column 11 lines 32-39.	By means of the signals, with channel indicators, received from code reader, 72,	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Language	Language	Language
<p>control signal is for controlling identification of content of said information and for transmission and for</p>	<p>controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75. By comparing identification signals on the incoming programming with the programming schedule ...</p>	<p>dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
<p>controlling a switch to communicate said content.</p>	<p>Column 11 lines 38-43.</p>	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Support to instant specification filed June 6, 1995.
Language	Language	References	Language
			<p>Appendix A</p> <p>information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular programmed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
	<p>... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	
Column 11 lines 50-57.			

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A

Dependent Claim 34.				
The method of claim 3, wherein said control signal is for controlling identification of content of said information transmission and	Column 11 lines 32-39.	By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75. By comparing identification signals on the incoming programming with the programming schedule ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
delay of transmission of said content.	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
	programming.	Appendix A
	Column 11 lines 57-65.	<p>been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed</p>
		<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 329 line 2-22.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
				fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.
Dependent Claim 35. The method of claim 3, wherein said control signal is for controlling selection of a storage location and	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ...
			Page 84 lines 26-28.	
			Page 28 lines 26-27.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
		Language
	Appendix A	
storage of a portion of said information transmitted at said selected storage location.	<p>Column 11 lines 57-61.</p> <p>Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/computer, 73, selects a video recorder/player, 76 or 78, ...</p>	<p>Page 49 lines 26-27.</p> <p>Page 329 line 2-15.</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; ...</p>
	<p>Column 11 lines 57-65.</p> <p>Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.</p>	<p>Page 329 line 2-22.</p> <p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
				or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.
Independent Claim 36.				
A method of processing a signal in a system having	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	Page 324 lines 8-24.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...
a transmitter station and	Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrates one instance of such use. Figure 3 illustrates the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.	Page 324 lines 18-21.	Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
a receiver station, said method comprising the steps of:	Column 15 lines 27-30.	FIG 5 illustrates methods for monitoring reception and operation which methods can be used to gather statistics on programming usage and associated uses of other data transmissions and equipment.	Page 312 line 33 to page 313 line 8.	Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local apparatus receives programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing ...
inputting said signal at	Column 10 lines 61-64.	Incoming programming transmissions are	Page 324 lines 23-33.	The station receives programming from many

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
				programming is available,....
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
inputting a schedule at said transmitter station, said schedule including at least one of:	Column 11 lines 21-22.	Such input information might include the cable television system's complete programming schedule,...	Page 326 lines 30-31.	Such input information can include the complete programming schedule of the station of Fig. 6,....
(1) a time at which to transmit said first portion of said signal; and	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit,....
(2) one of a frequency and an output network on which to transmit said first portion of said signal;	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit,....
	Column 6 lines 26-30.	As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.	Page 29 lines 11-15.	The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.
transmitting said first portion of said signal from said transmitter station	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	References	References
Language	Language	Language
<p>according to said schedule based on a comparison performed with said identifier;</p>	<p>Column 11 lines 38-43.</p> <p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Fig. 5 shows a variety of input apparatus with capacity for inputting programming (including SPAM information) selectively, via matrix switch, 258, to apparatus of the subscriber station of Fig. 5, intermediate apparatus with capacity for processing and/or recording</p>
<p>processing at least a portion of said signal to</p>	<p>Column 16 lines 5-11.</p> <p>... TV set, 131, may receive programming from many sources including cable converter box, 133, video cassette recorder, 135, and videodisc player, 137. In every programming unit played on TV set, 132, TV decoder, 131, receives every</p>	<p>Page 327 line 35 to page 328 line 13.</p> <p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 313 lines 16-23.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
gather at least one statistic on availability, use or usage of said programming at said receiver station; and		signal for which it is instructed to search in a predetermined fashion and transfers the signals to signal processor, 130, ...		inputted programming selectively, and output apparatus for displaying or otherwise outputting programming selectively to human senses.
	Column 15 lines 27-30.	FIG 5 illustrates methods for monitoring reception and operation which methods can be used to gather statistics on programing usage and associated uses of other data transmissions and equipment.	Page 314 lines 20-28. Page 315 lines 6-8. Page 315 lines 20-24.	Associated with each intermediate apparatus and output apparatus is one or more appropriate decoders. ... At TV tuner, 215, is TV decoder, 282. ... At TV monitor, 202M, is TV decoder, 145. Fig. 5 shows each decoder as having capacity for transferrng monitor information to signal processor, 200, by bus communications means. Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.
			Page 312 line 33 to page 313 line 8.	Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local apparatus receives programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing ...
	Column 18 lines 38-41.	Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programing availability to record and transmit to a	Page 28 lines 25-35.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity

Appendix A

Claim Language	References	Language	References	Support to instant specification filed June 6, 1995. Language
		remote site.		<p>for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...</p>
identifying one of said signal and content of said signal at said receiver station on the basis of said identifier.	Column 16 lines 3-11. Column 15 lines 57-62.	<p>In FIG 5, each decoder receives every relevant signal received by its associated player or recorder unit. ... and transfers the signals to signal processor, 130, ...</p> <p>The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.</p>	<p>Page 397 lines 17-20.</p> <p>Page 315 lines 20-24.</p> <p>Page 44 lines 26-32.</p> <p>Page 49 line 26 to Page 50 line 4.</p>	<p>Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.</p> <p>Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.</p> <p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ...</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
Dependent Claim 37.				
The method of claim 3, wherein control signal is for	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
			Page 329 line 2-22.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the
controlling delay of transmission of said information transmission.	Column 11 lines 57-65.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
	switch, 75, to transfer the programing to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programing.	<p>added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.</p>
Dependent Claim 38.		
The method of claim 3, wherein said control signal is for	<p>...signal processor, 200, to hold examples of the sought for unique signals in its buffer/ comparator, 8, and compare them with all incoming signals.</p>	<p>The signal processor, 200, of said station is preprogrammed ... with particular news-items-of-interest information that includes identification information of the particular stocks in said portfolio....</p> <p>One company whose stock is preprogrammed at said microprocessor, 205, is the American Telephone and Telegraph Company whose stock is identified by particular binary information of "T". And among the news-items-of-interest information at said RAM is an instance of said binary information of "T".</p> <p>...said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490, filed November 3, 1981	References	Language
controlling said second of said plurality of receiver stations to receive said information transmission.	Column 19 lines 20-25.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...	Support to instant specification filed June 6, 1995. Language
Appendix A			
		<p>analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>matches the aforementioned binary information of "T" that is among the news-items-of-interest information....</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-radio-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) By contrast, the...</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8-30 information.</p> <p>Executing said determine-whether-to-select instructions</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
Appendix A		
		causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.
		Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.
	Page 439 lines 14-15.	...to receive the transmission of cable channel 13; ...
	Page 437 lines 1-6.	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.
		Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...
	Page 439 lines 9-15.	...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
	Page 295 lines 6-8.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
			Page 439 lines 9-15.	...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
Dependent Claim 39. The method of claim 3, wherein said control signal is for controlling transmission of said information to a transmission according to a transmission schedule and for	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53,	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
		Appendix A
controlling said second of said plurality of receiver stations to store said information transmission.	<p>should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p> <p>...signal processor, 200, to hold examples of the sought for unique signals in its buffer/comparator, 8, and compare them with all incoming signals.</p> <p>Column 18 lines 56-58.</p>	<p>unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>The signal processor, 200, of said station is preprogrammed ... with particular news-items-of-interest information that includes identification information of the particular stocks in said portfolio....</p> <p>One company whose stock is preprogrammed at said microprocessor, 205, is the American Telephone and Telegraph Company whose stock is identified by particular binary information of "T". And among the news-items-of-interest information at said RAM is an instance of said binary information of "T".</p> <p>...said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information....</p> <p>All eight of said messages are commands.</p>
	<p>Column 19 lines 20-27. Analyzing these identifier signals in a</p>	<p>Page 420 lines 6-20.</p> <p>Page 422 lines 33 to Page 423 line 4.</p> <p>Page 267 lines 20-28</p>

Claim Language	References	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Support to instant specification filed June 6, 1995.
Language	Language	Language	Language	Language
		<p>predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...</p>	<p>from example #5.</p> <p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>Appendix A</p> <p>The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
		Appendix A
		preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. ... to receive the transmission of cable channel 13; ... Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert to cause selected apparatus of said station--cable converter box, 201, ... to
	Page 439 lines 14-15.	
	Page 437 lines 1-6.	
	Page 439 lines 9-15.	
	Page 295 lines 6-8.	
	Page 439 lines 9-15.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
			Page 445 lines 24-27. Page 446 lines 18-23.	receive the transmission of cable channel 13; instructions causes controller, 20, ... to switch power on to video recorder/player, 217, controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
Dependent Claim 40. The method of claim 3, wherein said control signal is for controlling transmission of said information at a specific time and				
	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions...
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	
References	Language	References	Language
	<p>Column 11 lines 50-57.</p> <p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p> <p>Column 19 line 60 to column 20 line 1.</p> <p>generation and output of information.</p>	<p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p> <p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>Appendix A</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
				required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
		This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.	Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...
Independent Claim 41.				
A method of communicating a plurality of signals, said method comprising the steps of:	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Language		Language

Appendix A

Appendix A					
	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....	Page 84 lines 26-28.			
	... monitor information that identifies what programming is available, ...	Page 28 lines 26-27.			
	Meter-monitor segments contain meter information and/or monitor information.	Page 49 lines 26-27.			
	Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information.	Page 326 lines 30-33.			
	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...	Page 324 lines 23-33.			
	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62.	Page 327 line 35 to page 328 line 13.			
	Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code ...	Column 11 lines 21-24.			
	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Column 10 lines 61-64.			
inputting a signal,					
said signal including programming and an identifier;		Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	References	Language
						Appendix A
						and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
					Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
					Page 28 lines 26-27.	...monitor information that identifies what programming is available,....
					Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
inputting a schedule including a designation for each of said plurality of signals of at least one of	Column 11 lines 21-22.		Such input information might include the cable television system's complete programming schedule,...		Page 326 lines 30-31.	Such input information can include the complete programming schedule of the station of Fig. 6,....
(1) an approximate transmission time, and	Column 11 lines 28-31.		Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.		Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit,....
(2) one of a transmission frequency and an output network;	Column 11 lines 28-31.		Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.		Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit,....
	Column 6 lines 26-30.		As shown, the input signals are the entire		Page 29 lines 11-15.	The inputted information is the entire range of

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
		Appendix A
transferring said signal to a distribution system of	Column 11 lines 50-57.	frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.
		For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
a transmission station	Column 10 lines 24-28.	Page 328 line 22 to page 329 line 1.
according to said schedule;	Column 11 lines 38-43.	Page 327 line 35 to page 328 line 13.
		<p>FIGS. 3A, 3B and 3C illustrates one instance of such use. Figure 3 illustrates the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.</p> <p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
			<p>amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>	
			<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 337 lines 1-19.</p>	
identifying one of said plurality of signals based on said identifier; and	Column 12 lines 45-53.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs.	<p>Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
		Appendix A
	<p>Column 15 lines 57-62.</p> <p>The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.</p>	<p>transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.</p> <p>Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.</p> <p>Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.</p> <p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <ul style="list-style-type: none"> ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ... <p>And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.</p>
outputting said identifier from a storage location to a remote location.	<p>Column 12 lines 54-56.</p> <p>Signal processors, 71 and 96, can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively.</p>	<p>Page 315 lines 20-24.</p> <p>Page 44 lines 26-32.</p> <p>Page 49 line 26 to Page 50 line 4.</p> <p>Page 337 lines 19-21.</p>
Dependent		

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
		References		Language	
Appendix A					
Claim 42.					
The method of claim 3, wherein said control signal is for controlling generation of information to	Column 19 line 60 to column 20 line 1.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 25 line 34 to page 26 line 2. Page 37 line 26 to page 38 line 8.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	
complete said information	Column 19 lines 59-60.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ... Then the host says, "And here is what your portfolio did."	Page 26 lines 4-11. Page 25 lines 33-34.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ... Then the host says, "And here is what your portfolio did."	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
				References	Language
transmission and output of said generated information with said information transmission.					Appendix A
Dependent Claim 43.					
The method of claim 3, wherein control signal is for controlling transmission of said information to a programming schedule and	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	
	Page 84 lines 26-28.			SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....	
		... monitor information that identifies what programming is available, ...	Page 28 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.	
	Page 49 lines 26-27.			For example, computer, 73, receives a given SPAM message that contains given "program	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
processing of a response to information contained in said information transmission.		should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.		unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
	Column 19 lines 42-44.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 20-24.	Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.
	Column 19 line 60 to column 20 line 1.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 25 line 34 to page 26 line 2. Page 37 line 26 to page 38 line 8.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	References	References	Language
			Appendix A
<p>Dependent Claim 44.</p> <p>The method of claim 3, wherein said control signal is for controlling transmission of said information to a programming schedule and</p>	<p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p>	<p>Page 26 lines 4-11.</p>	<p>required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p>
	<p>Column 11 lines 38-43.</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>

Claim Language	References	Language	References	Support to instant specification filed June 6, 1995. Language
			<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions</p>
<p>output of said information transmission at said second of said plurality of receiver stations.</p>	<p>Column 11 lines 50-57.</p> <p>Column 19 lines 20-25.</p>	<p>... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87,</p> <p>controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p> <p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...</p>	<p>Page 267 lines 20-28 from example #5.</p>	<p>Appendix A</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	References	References	Language
			<p>program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13; ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p>
			<p>Page 439 lines 14-15.</p> <p>Page 437 lines 1-6.</p> <p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p>
<p>Dependent Claim 45.</p> <p>The method of</p>	<p>Column 20 lines 37-42.</p>	<p>The signal transmission from processor,</p>	<p>In this alternate method, ... said first SPAM</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Language	Language	Language
<p>claim 3, wherein said control signal is for controlling decryption of a portion of said information transmission and output of information decrypted in said information transmission.</p>	<p>204, also passes a signal word to signal processor, 200, ...</p> <p>... which, in a predetermined fashion, signal processor, 200, decrypts and transfers...</p> <p>... to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.</p>	<p>message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...</p> <p>By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")</p> <p>... the information of said segments is encrypted prior to transmission ...</p> <p>The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message.</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any</p>
		<p>Page 281 lines 1-6.</p> <p>Page 282 line 2 to page 283 line 33.</p> <p>Page 478 lines 1-5.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
				of the methods described above--for example, in the method of the first message of example #4.)
Independent Claim 46. A method of transmitting one of a plurality of signals comprising the steps of:	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	Page 324 lines 8-24.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...
	Column 11 lines 21-22.	Such input information might include the cable television system's complete programming schedule,...	Page 326 lines 30-31.	Such input information can include the complete programming schedule of the station of Fig. 6,....
inputting a signal,	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
said signal including programming and an identifier;	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62,

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
		References		References	
		Language		Language	
				Appendix A	
inputting a schedule to a controller for controlling a transmission station, said schedule including for each of said plurality of signals at least one of					and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
				Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate television or radio or other programming transmissions
(1) an approximate transmission time; and				Page 28 lines 26-27.	... monitor information that identifies what programming is available,....
				Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
(2) one of a transmission frequency and an output network;				Page 326 lines 30-31.	Such input information can include the complete programming schedule of the station of Fig. 6,....
				Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit,....
				Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit,....

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
	Column 6 lines 26-30.	As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.	Page 29 lines 11-15.	The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.
transmitting said signal	Column 11 lines 50-57.	... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
according to said schedule;	Column 11 lines 38-43.	By comparing identification signals on the incoming programing with the programing schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programing.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
		References	Language	References	Language
location.			sites via telephone or other data transfer networks, 97 and 99 respectively.		remote sites via telephone or other data transfer networks, 97 and 99, respectively.
Dependent Claim 47.					Appendix A
The method of claim 3, wherein said control signal is for controlling transmission of said information to a schedule and	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....	
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...	
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.	
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87,	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
output of said information transmission as a portion of a multimedia presentation.	Column 19 lines 20-29.	controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 267 lines 20-28 from example #5.	Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
		Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-25.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) By contrast, the ... In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ... Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.
			Page 436 line 9 to page 437 line 3.	Receiving said Select-WSW-Program-Unit message causes

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	References	Language
				Appendix A		
				<p>decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p>		
Then, in a predetermined fashion, microcomputer, 205, may ...			Page 437 lines 1-6.			
... instruct tuner, 214, to switch box, 201,			Page 439 lines 9-15.			

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
	References	References
	<p>to channel X ...</p> <p>... and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...</p> <p>... and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on ...</p> <p>... and tuner, 215, to tune appropriately to "Wall Street Week."</p> <p>Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.</p>	<p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p> <p>...instructions causes controller, 20, ...; to switch power on to video recorder/player, 217, ...</p> <p>...controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p> <p>...instructions causes controller, 20, to switch power on to monitor, 202M, ...</p> <p>Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...</p> <p>...and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market</p>
	<p>Page 295 lines 6-8.</p> <p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p> <p>Page 445 line 24 to page 446 line 1.</p> <p>Page 445 line 35 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p> <p>Page 25 lines 26-33.</p>	<p>Appendix A</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
	<p>Column 19 lines 67 to column 20 line 2.</p>	<p>The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p>	<p>over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.</p> <p>And the Fig. 1C combining is displayed.</p> <p>TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p>
<p>Dependent Claim 48.</p> <p>The method of claim 3, wherein said first of said plurality of receiver stations and</p>	<p>Column 11 lines 38-39.</p>	<p>By comparing identification signals on the incoming programming with the programing schedule ...</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
References	References	References
Appendix A	Appendix A	Appendix A
<p>said second of said plurality of receiver stations each identify content of said information transmission by processing said control signal,</p> <p>said method further comprising the step of including an identifier in said control signal.</p>	<p>Column 19 lines 20-23.</p> <p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said</p>
	<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Language	Language	Language
		<p>please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ...</p> <p>Said instructions contain one instance, and ...</p> <p>program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</p> <p>Automatically, microcomputer, 205, compares said one instance to said</p> <p>program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13;...</p> <p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station; automatically adds, in a predetermined fashion, source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, ...</p>
<p>Column 11 lines 3-5.</p> <p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, ...</p>	<p>Page 439 lines 14-15.</p> <p>Page 325 line 34 to page 326 line 10.</p>	<p>Appendix A</p>

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		References	
		Language		Language	
	Column 19 lines 17-20.	... processor or monitor, 12, ... reacts, ... by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.		Page 288 lines 16-20.	... microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.
				Page 435 lines 16-18.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...
				Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
				Page 435 lines 16-25 from example #5.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ... Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.
	Column 11 lines 38-39.	By comparing identification signals on		Page 327 line 35 to	Computer, 73, monitors incoming

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	References	Language
	References	Language	References	Language
		the incoming programming...	page 328 line 13.	<p>programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>...monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.</p>
Dependent Claim 49.		If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	<p>Column 7 lines 54-58.</p> <p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 31 lines 14-18.</p>	
The method of	Column 11 lines 38-39.	By comparing identification signals on	Page 327 line 35 to	Computer, 73, monitors incoming

Claim Language	References	Language	References	Language
				<p>programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message informing with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>...monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>So far this disclosure has described an intermediate transmission station that transmits conventional television programming; however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data</p>
<p>claim 48, wherein said identifier identifies one of television and radio programming, said method further comprising the step of</p>	<p>the incoming programming...</p> <p>This particular embodiment describes a transmission facility transmitting only television programming. The facility could also process and transmit radio programming and other electronic data according to the methods described here ...</p> <p>Column 12 lines 57-61.</p>		<p>page 328 line 13.</p> <p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 339 lines 9-26.</p>	<p>Appendix A</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	
References	References	References	Language
Appendix A			
including said one of television and radio programming in said information transmission.	<p>Column 10 lines 61-64.</p> <p>Column 12 lines 57-61.</p>	<p>Incoming programing transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.</p> <p>This particular embodiment describes a transmission facility transmitting only television programming. The facility could also process and transmit radio programming and other electronic data according to the methods described here ...</p>	<p>communications programming ...</p> <p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...</p> <p>So far this disclosure has described an intermediate transmission station that transmits conventional television programming; however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...</p>
<p>Dependent Claim 50.</p> <p>The method of claim 48, wherein said identifier identifies one of video and audio, said method further comprising the step of</p>	Column 11 lines 38-39.	By comparing identification signals on the incoming programming...	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has</p>

Claim Language	References	Language	References	Language
				Appendix A
				been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available,....
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
			Page 339 lines 9-11.	So far this disclosure has described an intermediate transmission station that transmits conventional television programming....
including said one of video and audio in said information transmission.	Column 12 lines 57-58. Column 10 lines 61-64.	This particular embodiment describes a transmission facility transmitting only television programming. Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	References	Language
	Column 12 lines 57-58.	This particular embodiment describes a transmission facility transmitting only television programming.	Page 339 lines 9-11.	receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire... So far this disclosure has described an intermediate transmission station that transmits conventional television programming....		Appendix A
Dependent Claim 51. The method of claim 48, wherein said identifier identifies one of a datum and an instruction, said method further comprising the step of	Column 11 lines 38-39.	By comparing identification signals on the incoming programming...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ...monitor information that identifies what programming is available,...		
			Page 84 lines 26-28.			
			Page 28 lines 26-27.			
			Page 49 lines 26-27.			Meter-monitor segments contain meter information and/or monitor information.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
including said one of a datum and an instruction in said information transmission.	Column 7 lines 54-58.	If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 31 lines 14-18.	If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.
	Column 17 line 44.	... and transfer such signals to such equipment as directed.	Page 95 lines 18-21.	Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to ... and to transfer said message to ...
	Column 19 lines 60-65.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...	Page 25 line 33 to page 26 line 2.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...
			Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			Page 26 line 4.	Said signal instructs microcomputer, 205, ...

Appendix A

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		References	
Language		Language		Language	
Appendix A					
Dependent Claim 52. The method of claim 3, wherein said first of said plurality of receiver stations and said second of said plurality of receiver stations each monitor one of availability, use, and usage of content of said information said transmission, said method further comprising the step of	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...	Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....	
	Column 11 lines 6-7.	...pass them, along with information identifying the channel source of each signal, externally to code reader, 72.		...adds, ... source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.	
	Column 11 lines 8-10.	Signal processor, 71, also has means to record said signals and transfer them to external communications network, 97.	Page 326 lines 11-13.	Signal processor system, 71, also has signal processor means to control signal processor system, 71,...	
	Column 12 lines 45-56.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs. Signal processors, 71 and 96, can transmit such records of programming to remote sites via telephone or other data transfer networks.	Page 337 lines 1-21.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
		97 and 99 respectively.		Appendix A
	Column 18 lines 29-41.	FIG. 6B also shows signal processor, 200, monitoring for a data gathering and ratings service.	Page 411 lines 10-11.	By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs. And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.
		TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...	Page 88 lines 19-22.	In addition, because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen Company) that collect statistics on viewership and programming usage.
			Page 408 lines 18-29.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.
			Page 414 lines 13-27.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder,

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Language	Language	Language
		Appendix A
		210, and inputted to said controller, 44.
	The processors, 204 and 210, transfer this information to signal processor, 200, ...	<p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p>

Claim Language	References	Language	References	Language
		... for recording and subsequent transmission to a remote data collection site.	<p>Page 411 line 28 to page 412 line 2.</p> <p>Page 173 line 30 to page 174 line 23 from example #3.</p> <p>Page 419 lines 4-15.</p> <p>Page 28 lines 25-35.</p>	<p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in ...</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3).")</p> <p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	References
References	Language	Language	Language
<p>including in said information transmission a portion of information to be processed that identifies said content of said</p>	<p>remote site.</p> <p>Column 15 lines 27-30.</p>	<p>FIG 5 illustrates methods for monitoring reception and operation which methods can be used to gather statistics on programming usage and associated uses of other data transmissions and equipment.</p>	<p>for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...</p> <p>Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local apparatus receives programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing ...</p> <p>[Signal processor 200 in Fig. 7 and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73,</p>

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		References	
Language		Language		Language	
information transmission.					determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
				Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate television or radio or other programming transmissions....
				Page 28 lines 26-27. Page 49 lines 26-27.	...monitor information that identifies what programming is available,.... Meter-monitor segments contain meter information and/or monitor information.
Dependent Claim 53. The method of claim 52, wherein said portion of information is stored at said storage device		Column 11 lines 38-39.	By comparing identification signals on the incoming programming with the programming schedule ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
<p>based on said step of communicating, said method further comprising the step of including said control signal in said information transmission before storing said control signal.</p>	<p>Column 11 lines 3-14.</p>	<p>Appendix A</p>
		<p>network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
		<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p>
		<p>... monitor information that identifies what programming is available, ...</p>
		<p>Meter-monitor segments contain meter information and/or monitor information.</p>
	<p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, along with information identifying the channel source of each signal, externally to code reader, 72. ...</p>	<p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station, automatically address, in a predetermined fashion source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.</p>
		<p>Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73.</p>
<p>Dependent</p>		<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 325 line 34 to page 326 line 11.</p> <p>Page 326 lines 16-18.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
programmed to process said control signal	Column 9 lines 47-52.	The controller, 20, is programmed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.	Page 248 line 17 to page 249 line 5.	Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.	Appendix A
based on one of a transmission location and time and wherein said step of	Column 4 lines 5-6; Column 9 lines 53-55.	These techniques employ signals embedded in programs. The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.	Page 13 lines 25-26. Page 257 line 24 to page 258 line 19.	Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. The present invention employs signals embedded in programming. Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	References	Language
<p>communicating comprises inputting said control signal to said storage device in a fashion which enables said storage device to output said control signal in said one of a transmission location and time.</p>	<p>Column 19 lines 60-63.</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.</p>	<p>Page 265 line 27 to Page 266 line 21.</p> <p>Page 59 lines 29-33.</p> <p>Page 25 line 34 to page 26 line 1.</p>	<p>pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz.</p> <p>Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
			Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	in the programming transmission, and transmitted. The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
	Column 19 lines 43-44.	...instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
Dependent Claim 56.				
The method of claim 55, wherein said one of said first of said plurality of receiver stations and said second of said plurality of receiver stations is programmed to process said control signal based on	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
one of an interval of time and	Column 9 lines 53-55.	The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.	Page 396 lines 8-10. Page 257 line 24 to page 258 line 19.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples. Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ... Controller, 20, has capacity for keeping track of elapsed time, and after

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
<p>a predetermined time.</p>				<p>determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>Such input information can indicate when and how the station should expect to receive each program unit,....</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p>
	Column 11 lines 25-28.		Page 265 line 27 to Page 266 line 21.	
	Column 19 lines 8-9.	Such input information might also indicate when and where the cable head end facility should expect to receive the programming.	Page 326 lines 33-35.	
		Microcomputer, 205, is preinformed of the time of cablecasting.	Page 437 lines 1-3.	
<p>Dependent Claim 57.</p> <p>The method of claim 55, wherein said one of said first of said plurality of receiver stations and said second</p>	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, <p>Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a</p>	Page 390 lines 30-35.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
<p>of said plurality of receiver stations is</p> <p>programmed to process said control signal</p>	<p>first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.</p> <p>Column 11 lines 21-24.</p> <p>Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code ...</p> <p>Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to...</p> <p>Column 19 lines 42-43.</p> <p>Column 9 lines 47-52.</p> <p>The controller, 20, is programmed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.</p>	<p>Appendix A</p> <p>hotel, or any other station where programming such as television or radio is displayed to persons.</p> <p>Page 396 lines 8-10.</p> <p>Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.</p> <p>Page 326 lines 30-33.</p> <p>Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information.</p> <p>Page 450 lines 31-32.</p> <p>... caused his microcomputer, 205, to be preprogrammed as described above;....</p> <p>Microcomputer, 205, is preprogrammed to ... respond ... to ...</p> <p>Page 21 lines 20-23.</p> <p>Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.</p> <p>Page 248 line 17 to page 249 line 5.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
					Appendix A
based on a location in said information transmission.	Column 11 lines 38-39.	By comparing identification signals on the incoming programming...	Page 327 line 35 to page 328 line 13.	<p>frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain</p>	
			Page 84 lines 26-28.		
			Page 28 lines 26-27.		
			Page 49 lines 26-27.		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Dependent Claim 58. The method of claim 57, further comprising the step of embedding said control signal in said information transmission.	Column 19 lines 43-44.	...instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	meter information and/or monitor information. ... instruction signals embedded in the "Wall Street Week" programming transmission.
	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33. Page 25 line 34 to page 26 line 1. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. Page 13 lines 25-26. Page 327 line 35 to page 328 line 13.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ... The present invention employs signals embedded in programming. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62,

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
				and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available,....
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
	Column 19 lines 43-44.	...instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
	Column 9 lines 55-57.	This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.	Page 250 lines 13-17.	Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synch command.
			Page 251 lines 8-11.	Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...
			Page 263 lines 19-24.	... said information to radio decoder, 42, which decodes the the embedded signal

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Dependent Claim 59. The method of claim 57, further comprising the step of performing said step of embedding	Column 7 lines 50-54.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both.	Page 37 lines 26-28. Page 31 lines 10-14.	information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both.
	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
			Page 25 line 34 to page 26 line 1. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor ...

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
	Column 4 lines 5-6.	<p>These techniques employ signals embedded in programs.</p> <p>By comparing identification signals on the incoming programming...</p>	6, and page 90 lines 4-11.	<p>The present invention employs signals embedded in programming.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p>
	Column 11 lines 38-39.		Page 13 lines 25-26.	
			Page 327 line 35 to page 328 line 13.	
			Page 84 lines 26-28.	
			Page 28 lines 26-27.	
	Column 19 lines 43-44.	...instruction signals embedded in the "Wall Street Week" programming transmission.	Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
			Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A

The method of claim 3, further comprising the step of: including in one of said information transmission and said control signal a first portion of information which	Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion...	Page 30 lines 7-9. Page 36 line 32 to page 37 line 3.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion. Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs
	Column 7 lines 37-39.	...that enables buffer/comparator, 8, among other things, to assemble signal units from signal words.	Page 37 lines 22 to page 38 line 10.	Controller, 39, 44, or 47, is preprogrammed to receive units of signal information, to assemble said units into signal words that subscriber station apparatus can receive and process, and to transfer said words to said apparatus. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
<p>select one of a second portion of information and</p> <p>a device to which to communicate a second portion of information.</p>	Column 7 lines 54-58.	If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	<p>Page 156 line 33.</p> <p>Page 157 lines 5-7.</p> <p>Page 14 lines 22-25.</p> <p>Page 31 lines 14-18.</p> <p>Page 31 lines 14-18.</p>	<p>to transfer said signals to said apparatus. Said controller, 39, 44, or 47, has one or more output ports for communicating signal information to said apparatus.</p> <p>Fig. 3A shows one such preferred controller, 39.</p> <p>Buffer, 39C, and processor, 39D, are the second buffer and processor and perform protocol conversion functions.</p> <p>In all cases, signals may convey information in discrete words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction.</p> <p>If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.</p> <p>If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.</p>
	Column 7 lines 54-58.	If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 31 lines 14-18.	
	Column 7 lines 54-58.	If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 31 lines 14-18.	
Dependent Claim 61.				
The method of claim 60, further comprising the steps of:				
communicating said second portion of information to said storage device; and	Column 11 lines 3-14.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them,	Page 325 line 34 to page 326 line 11.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
		along with information identifying the channel source of each signal, externally to code reader, 72. ... Code reader, 72, passes the received signals, with channel identifiers, to cable program controller and computer, 73.		Appendix A into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addressed to ITS apparatus of said intermediate transmission station, automatically adds, in a predetermined fashion source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72. Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73.
storing said second portion of information at said storage device.	Column 11 lines 38-39.	By comparing identification signals on the incoming programming with the programming schedule ...	Page 326 lines 16-18. Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
		References		References	
		Language		Language	
				Appendix A	
Dependent Claim 62. The method of claim 61, wherein said device to which to communicate said second portion of information comprises a computer and				television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information.	
				Page 28 lines 26-27. Page 49 lines 26-27.	
				Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	
said second portion of information includes a first instruction to be communicated to said computer, said method further comprising the step of including said second portion of information in said control signal.		Column 11 lines 12-14. Column 19 lines 63-64.	Code reader, 72, passes the received signals, with channel identifiers, to cable program controller and computer, 73. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 326 lines 16-18. Page 26 lines 1-2. Page 37 line 26 to page 38 line 8.	
		Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...	Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....

Claim Language	References	Language	References	Language
Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. Support to instant specification filed June 6, 1995.				
			<p>Page 59 lines 29-33.</p> <p>Page 327 line 35 to page 328 line 13.</p> <p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 25 line 33 to page</p>	<p>Appendix A</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Then the host says, "And here is what your</p>
	<p>Column 11 lines 38-39.</p> <p>By comparing identification signals on the incoming programming...</p>			
	<p>Column 19 lines 60-66.</p> <p>At this point, an instruction signal is</p>			

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Language	Language	Language
	<p>generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, ...</p>	<p>26 line 2..</p> <p>Page 37 line 26 to page 38 line 8.</p>
		<p>portfolio did." At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p>
<p>Dependent Claim 63.</p> <p>The method of claim 62, wherein signal content</p>	<p>Column 15 lines 57-62.</p> <p>The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable</p>	<p>Page 26 lines 4-8.</p> <p>Page 315 lines 20-24.</p>
		<p>Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
		systems, and possibly times of transmission.		is tuned.
	Column 4 lines 5-13.	These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing, that they can convey signals to equipment that must switch manners or modes of operation during transmissions of individual units of programming, and that they can be monitored.	Page 13 lines 25-32.	The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. They occur at precise times in programming and can synchronize the operation of receiver station apparatus to the timing of programming transmissions. They can be conveniently monitored.
enables said one of said plurality of receiver stations to communicate to a remote station	Column 11 lines 8-10.	Signal processor, 71, also has means to record said signals and transfer them to external communications network, 97.	Page 326 lines 11-15.	Signal processor system, 71, also has signal processor means to control signal processor system, 71, to record meter-monitor information of said message information, and to transfer recorded information to external
			Page 44 lines 26-32.	Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.
			Page 49 line 26 to Page 50 line 4.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ...

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
	Column 12 lines 54-56.	Signal processors, 71 and 96, can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively.	Page 337 lines 19-21.	communications network, 97.
	Column 18 lines 29-41.	FIG. 6B also shows signal processor, 200, monitoring for a data gathering and ratings service.	Page 411 lines 10-11.	And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.
		TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...	Page 88 lines 19-22.	In addition, because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, ...
			Page 408 lines 18-29.	... monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen Company) that collect statistics on viewership and programming usage.
			Page 414 lines 13-27.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above escribed fashion.
			Page 15 lines 16-22.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44.
				The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
		The processors, 204 and 210, transfer this information to signal processor, 200, ...	Page 36 lines 32-33.	series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...
			Page 38 lines 11-14.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.
			Page 411 lines 10-15.	Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus. ... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.
			Page 418 line 23 to page 419 line 15.	Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.
	... for recording and subsequent transmission to a remote data collection site.		Page 411 line 28 to page 412 line 2.	In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	References	Language
		<p>Page 173 line 30 to page 174 line 23 from example #3.</p> <p>Page 419 lines 4-15.</p> <p>Page 28 lines 25-35.</p>	<p>to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in ...</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st" monitor information (#3).")</p> <p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p>
	<p>Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.</p>		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
information evidencing one of (i) receipt of a portion of said information transmission and			Page 397 lines 17-20.	Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...
	Column 11 lines 8-10.	Signal processor, 71, also has means to record said signals and transfer them to external communications network, 97.	Page 326 lines 11-15.	Signal processor system, 71, also has signal processor means to control signal processor system, 71, to record meter-monitor information of said message information, and to transfer recorded information to external communications network, 97.
	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
	Column 18 lines 38-41.	Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.	Page 28 lines 25-35.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
<p>(ii) a function performed in response to a portion of said information transmission, said method further comprising the step of including said signal content in one of said information transmission and said control signal.</p>	<p>Column 12 lines 54-56.</p> <p>Signal processors, 71 and 96, can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively.</p> <p>Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs.</p>	<p>Page 397 lines 17-20.</p> <p>Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...</p> <p>Page 337 lines 19-21.</p> <p>And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.</p> <p>Page 337 lines 1-19.</p> <p>Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
	<p>Column 18 lines 30-37.</p> <p>TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned,</p>	<p>maintain as station logs.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ...</p> <p>Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.</p> <p>... because the station of Fig. 7 (and Fig. 7B)</p>
	<p>Page 408 lines 18-29</p>	<p>Page 414 lines 13-27</p>
	<p>Page 15 lines 16-22</p>	<p>Page 36 lines 32-33.</p> <p>Page 38 lines 11-14.</p>
	<p>Page 411 lines 10-15</p>	

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
		<p>Appendix A</p> <p>is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synchronizing command, and</p>
	<p>... for recording and subsequent transmission to a remote data collection site.</p>	<p>Page 418 line 23 to page 419 line 15.</p> <p>Page 411 line 28 to page 412 line 2.</p> <p>Page 173 line 30 to page 174 line 23 from example #3.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
			<p>said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1" monitor information (#3).")</p> <p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of</p>
		<p>Page 419 lines 4-15.</p> <p>Page 28 lines 25-35.</p> <p>Page 327 line 35 to page 328 line 13.</p>	
<p>Column 11 lines 38-39.</p>	<p>By comparing identification signals on the incoming programming ...</p>		

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
		<p>Appendix A</p> <p>Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>...monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C....</p> <p>Via a conventional multi-channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...</p> <p>Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes</p>
<p>Column 19 lines 14-15.</p>	<p>...pass all program and channel identifiers on all programing being cablecast on the multi-channel system.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 435 lines 16-18.</p> <p>Page 248 lines 22-26 from example #5.</p> <p>Page 250 lines 13-16 from example #5.</p> <p>Page 252 lines 15-35 from example #5.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
	Language	Appendix A
	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission</p> <p>Column 19 lines 60-63.</p>	<p>microcomputer, 205, to process the information of the meter-monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment (segment) then meter-monitor segment information that includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...</p> <p>Page 267 lines 20-28 from example #5.</p>
		<p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Page 59 lines 29-33.</p>
		<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>Page 25 line 34 to page 26 line 1.</p>
		<p>At this point, an instruction signal is generated at said program originating studio, embedded</p>

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
		References		References	
		Language		Language	
				Appendix A	
				in the programming transmission, and transmitted.	
				The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...	
				Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	
				The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...	
				The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...	
				So far this disclosure has described an intermediate transmission station that transmits conventional television programming; however, the intermediate station automating concepts of the present	
				Page 324 lines 8-24.	
				Page 324 lines 23-33.	
				Page 339 lines 9-26.	
				The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	
				Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	
				This particular embodiment describes a transmission facility transmitting only television programming. The facility could also process and transmit radio programming and other electronic data	
				Column 10 lines 15-23.	
				Column 10 lines 61-64.	
				Column 12 lines 57-61.	
				A method of communicating a signal comprising the steps of:	
				inputting a signal, said signal including	
				(i) specific programming including one of video, audio and data programming and	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	References	Language
	<p>according to the methods described here ...</p>		<p>invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...</p>
(ii) an embedded identifier;	<p>Column 4 lines 5-6.</p> <p>Column 11 lines 38-39.</p>	<p>Page 13 lines 25-26.</p> <p>Page 327 line 35 to page 328 line 13.</p>	<p>The present invention employs signals embedded in programming.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>
		<p>Page 84 lines 26-28.</p>	
		<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
<p>inputting said signal to a switch and a processor;</p>	<p>Column 10 line 64 to column 11 line 3.</p> <p>At distribution amplifiers, 63 through 70, each incoming feed is split into two paths. One is the conventional path whereby programming has flowed and continues to flow to recording devices, 76 and 78, and/or to flow to field distribution system, 93. The other path flows from each distribution amplifier, 63 through 70, individually to signal processor, 71.</p> <p>All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.</p>	<p>Appendix A</p> <p>In line between each of the aforementioned receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, and matrix switch, 75, is a dedicated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, that splits each incoming feed into two paths. One path is the conventional path whereby programming flows from each given receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, to matrix switch, 75. The other path inputs the transmission of said given receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, individually to signal processor system, 71.</p>
<p>determining said specific programming inputted to said switch;</p>	<p>Column 11 lines 32-39.</p> <p>By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75.</p> <p>By comparing identification signals on the incoming programming with the programming schedule ...</p>	<p>Page 325 lines 17-27.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
			<p>transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>... to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.</p>	
controlling said switch to communicate	Column 11 lines 62-64.	... instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...	<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 329 lines 15-20.</p>	
said specific programming according to timing instructions; and	Column 11 lines 57-60.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission,...	<p>Page 329 line 2-20.</p>	<p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information. ...</p> <p>Receiving said message causes computer, 73, to determine, ... that said "code" information matches ... schedule information of programming that is scheduled to be ... transmitted to the field system, 93, at a later time. So determining causes computer, 73, ... to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.</p>
	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network,	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
	98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	<p>information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>... to cause said selected recorder, 76 or 78, to turn on and record programming, ...</p> <p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information. ... Receiving said message causes computer, 73, to determine, ... that said "code" information matches ... schedule information of programming that is scheduled to be ... transmitted to the field system, 93, at a later</p>
delaying communication of said signal.	<p>Column 11 lines 64-65.</p> <p>Column 11 lines 57-60.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 329 line 15-16.</p> <p>Page 329 line 2-13.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A				
				time.
Independent Claim 65.				
A method of processing signals comprising the steps of:	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	Page 324 lines 8-24.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...
inputting a plurality of signals to a transmission station, wherein each of said plurality of signals includes	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
(i) one of specific video programming, audio programming, and data programming and	Column 12 lines 57-61.	This particular embodiment describes a transmission facility transmitting only television programming. The facility could also process and transmit radio programming and other electronic data according to the methods described here ...	Page 339 lines 9-26.	So far this disclosure has described an intermediate transmission station that transmits conventional television programming; however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...
(ii) an identifier:	Column 11 lines 38-39.	By comparing identification signals on	Page 327 line 35 to	Computer, 73, monitors incoming

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
		References	Language
		References	Language
	the incoming programming ...	page 328 line 13.	Appendix A programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
		Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
		Page 28 lines 26-27.	... monitor information that identifies what programming is available,....
		Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
inputting at said transmission station each of said plurality of signals to	Column 10 line 66 to Column 11 line 1.	Page 325 lines 21-24.	One path is the conventional path whereby programming flows from each given receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, to matrix switch, 75.
	Column 10 lines 40-41.		
a switch having	Column 10 lines 41-42.	Page 324 line 34.	...a conventional matrix switch, 75, well known in the art,....

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
		References	Language
		Language	Appendix A
a plurality of output channels;	Column 10 lines 40-47.	All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92:
processing each signal of said plurality of signals	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....
	Column 9 lines 33-40.	Each path is capable of receiving a transmission or a portion of a transmission and detecting digital signals in that portion and transmitting said signals to in-line equipment for further processing. Each of the paths described in FIGS. 2A, 2B, and 2C can identify and process only signals embedded in the particular transmission channel inputted to said paths.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. <i>See figures.</i> The apparatus of these separate paths are designed to act on the particular frequency ranges in which embedded signal information may be found. The first path, designated A, detects signal information embedded in the video information portion of said television channel signal.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
		Appendix A
		<p>The second path, designated B, detects signal information embedded in the audio information portion of said television channel signal.</p> <p>The third path, designated C, inputs the separately defined transmission to a digital detector, 38, which detects signal information embedded in any other information portion of said television channel signal...</p> <p>Fig. 2B shows a radio signal decoder that detects and processes signal information embedded in an inputted radio frequency.</p> <p>Fig. 2C shows a signal decoder that detects and processes signal information embedded in a frequency other than a television or radio frequency.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, ...</p> <p>SPAM signals are generated at original</p>
	<p>Page 35 lines 16-18.</p> <p>Page 35 lines 27-30.</p> <p>Page 36 lines 1-3.</p> <p>Page 36 lines 18-20.</p> <p>Page 37 lines 26-28.</p> <p>Page 327 line 35 to page 328 line 10.</p> <p>Page 84 lines 26-28.</p>	
<p>to determine that each of said one of specific video programming, audio programming, and data programming is input to said switch;</p>	<p>Column 11 lines 32-39.</p> <p>By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75.</p> <p>By comparing identification signals on the incoming programming with the programming schedule ...</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
				transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
comparing said identifier of each signal of said plurality of signals to predetermined data to determine when to transmit each signal of said plurality of signals; and	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 328 lines 8-13.	By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
communicating an instruction to delay communication of one signal of said plurality of signals.	Column 11 lines 61-64.	... in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...	Page 329 lines 13-20.	... in its preprogrammed fashion, ... to ... record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
	Column 11 lines 57-60.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission,...	Page 329 line 2-20.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information. ... Receiving said message causes computer, 73, to determine, ... that said "code" information matches ... schedule information of programming that is scheduled to be ... transmitted to the field system, 93, at a later time. So determining causes computer, 73, ... to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Dependent Claim 66. The method of claim 63, wherein said first portion of information controls said one of said plurality of receiver stations and				switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
	Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion...	Page 30 lines 7-9.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.
	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 36 line 32 to page 37 line 3. Page 327 line 35 to page 328 line 13.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
said signal content is communicated to said remote station, said method further comprising one step from the group consisting of:	Column 18 lines 22-25.	Monitor or processor, 204, also identifies signals addressed to tuner, 213, which it transfers accordingly. These signals instruct tuner, 213, to tune radio, 209, to the proper frequency for the simulcast.	Page 28 lines 26-27. Page 49 lines 26-27. Page 408 lines 31-34.	television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information. Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.
	Column 11 lines 8-10.	Signal processor, 71, also has means to record said signals and transfer them to external communications network, 97.	Page 410 lines 10-11.	Receiving said SPAM message causes said controller, 44, ... to ... tune radio, 209, to the frequency, ...
	Column 12 lines 54-56.	Signal processors, 71 and 96, can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively.	Page 326 lines 11-15. Page 337 lines 19-21.	Signal processor system, 71, also has signal processor means to control signal processor system, 71, to record meter-monitor information of said message information, and to transfer recorded information to external communications network, 97. And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.
	Column 18 lines 29-41.	FIG. 6B also shows signal processor, 200, monitoring for a data gathering and ratings service.	Page 411 lines 10-11.	In addition, because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, ...
			Page 88 lines 19-22.	... monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen Company) that collect statistics on viewership and programming usage.
		TV signal decoder, 203, and radio signal	Page 408 lines 18-29.	Periodically thereafter, said program

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Language	Language	Language
	<p>decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...</p>	<p>originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above escribed fashion.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also</p>
		<p>Page 414 lines 13-27.</p>
		<p>Page 15 lines 16-22.</p>
	<p>The processors, 204 and 210, transfer this information to signal processor, 200, ...</p>	<p>Page 36 lines 32-33.</p>
		<p>Page 38 lines 11-14.</p>
		<p>Page 411 lines 10-15.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.
			Page 418 line 23 to page 419 line 15.	Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.
	... for recording and subsequent transmission to a remote data collection site.		Page 411 line 28 to page 412 line 2.	In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in ...
			Page 173 line 30 to page 174 line 23 from example #3.	The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	
References	Language	References	Language
			Appendix A
including an identifier in said signal content;	Column 15 lines 57-62.	<p>Page 419 lines 4-15.</p> <p>Page 28 lines 25-35.</p> <p>Page 397 lines 17-20.</p> <p>Page 315 lines 20-24.</p> <p>Page 44 lines 26-32.</p>	<p>said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st" monitor information (#3).")</p> <p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record. ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...</p> <p>Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.</p> <p>Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	References	Language
					Appendix A	
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...		<p>subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.</p> <p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <ul style="list-style-type: none"> ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ... <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming</p>		
			Page 49 line 26 to Page 50 line 4.			
			Page 327 line 35 to page 328 line 13.			
			Page 84 lines 26-28.			

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
		Language
		Appendix A
	<p>transmissions....</p> <p>... monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW</p>	<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>
<p>Column 19 lines 20-23.</p>	<p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
				information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information. Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20. ...to receive the transmission of cable channel 13;...
			Page 439 lines 14-15.	
including said signal content in said first portion of information; and	Column 15 lines 57-62.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.	Page 315 lines 20-24.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.
			Page 44 lines 26-32.	Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
				to remote ratings stations in fashions that are described more fully below.
			Page 49 line 26 to Page 50 line 4.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ...
	Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion...	Page 30 lines 7-9.	Buffer/comparator, 8, receives said signals from said decoders and other signals information in a predetermined fashion.
including said first portion of information in said control signal.	Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion...	Page 36 line 32 to page 37 line 3.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs
	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...	Page 30 lines 7-9.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.
			Page 36 line 32 to page 37 line 3.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs
			Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
	<p>advertising might be a purchase order number). Such input information might also indicate when and where the cable head end facility should expect to receive the programming. Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.</p> <p>Column 19 lines 45-53.</p>	<p>Such input information can indicate when and how the station should expect to receive each program unit, Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk</p>
	<p>These signals instruct microcomputer, 205, ...</p>	<p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-16.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
		Appendix A
	<p>... to generate several graphic video overlays, ...</p> <p>... which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to ...</p> <p>... transmit these overlays to TV set, 202, ...</p> <p>... upon command.</p>	<p>drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."</p> <p>...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above</p>
		<p>Page 451 lines 7-11.</p> <p>Page 19 line 29 to page 20 line 20.</p> <p>Page 26 lines 4-8.</p> <p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
<p>respond to one of a command and a second instruction, said method further comprising one step of the group consisting of:</p>	<p>Column 11 lines 38-43.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
		<p>Page 327 line 35 to page 328 line 13.</p>	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p>
		<p>Page 84 lines 26-28.</p>	<p>... monitor information that identifies what programming is available, ...</p>
		<p>Page 28 lines 26-27.</p>	<p>Meter-monitor segments contain</p>
		<p>Page 49 lines 26-27.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
	References	References	Language
	<p>Column 19 lines 46-53.</p>	<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.</p>	<p>meter information and/or monitor information.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
storing said plurality of first instructions at said storage device; and	Column 11 lines 39-41.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, ...	Page 328 lines 9-10.	loading and running information for a particular combining.) ... with information of the programming schedule, received earlier from input, 74, and/or network, 98, ...
	Column 19 lines 62-63	... and is transmitted in the programming transmission.	Page 326 lines 28-30.	... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.
	Column 19 lines 43-53.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 25 line 35 to page 26 line 1. Page 21 lines 23-24.	... embedded in the programming transmission, and transmitted. ... instruction signals embedded in the "Wall Street Week" programming transmission.
		When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 451 lines 6-7. Page 23 line 35 to page 24 line 4.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ... Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
		These signals instruct microcomputer, 205, ...	Page 37 line 26 to page 38 line 8. Page 24 lines 5-16.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred, and to transfer said signals to said apparatus. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which

Appendix A

Claim Language	References	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. Language	References	Support to instant specification filed June 6, 1995. Language
				<p>decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."</p> <p>...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal</p>
	<p>... to generate several graphic video overlays, ...</p> <p>... which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to ...</p> <p>... transmit these overlays to TV set, 202, ...</p> <p>... upon command.</p>	<p>Page 451 lines 7-11.</p> <p>Page 19 line 29 to page 20 line 20.</p> <p>Page 26 lines 4-8.</p> <p>Page 44 lines 14-17.</p>		

Claim Language	References	Language	References	Language
	<p>Column 19 line 60 to column 20 line 1.</p>	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>Appendix A</p> <p>dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>....monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39,</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
	Language	Language
		Appendix A
<p>Dependent Claim 68.</p> <p>The method of claim 3, wherein said control signal is for controlling said first of said plurality of receiver stations to transmit said information transmission to said second of said plurality of receiver stations to</p>	<p>Column 11 lines 38-43.</p>	<p>44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p> <p>Page 26 lines 4-11.</p> <p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p> <p>Page 327 line 35 to page 328 line 13.</p> <p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. References	Support to instant specification filed June 6, 1995. Language	Support to instant specification filed June 6, 1995. References	Language
			<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p> <p>Page 450 lines 31-32.</p>	<p>received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>... caused his microcomputer, 205, to be preprogrammed as described above; ...</p>
control said second of said plurality of	<p>Column 11 lines 50-57.</p> <p>Column 19 lines 42-49.</p>	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87,</p> <p>controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p> <p>Microcomputer, 205, is preprogramed to respond in a predetermined fashion to</p>		<p>Appendix A</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
<p>receiver stations.</p>	<p>instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>... several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.</p> <p>These signals instruct microcomputer, 205, ...</p>	<p>Appendix A</p> <p>Microcomputer, 205, is preprogrammed to ... respond ... to instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p>
		<p>Page 21 lines 20-24.</p> <p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-6.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995
References	Language	Language

Appendix A

Dependent Claim 69. The method of claim 8, wherein said control signal is for controlling said first of said plurality of receiver stations to compare said first information to a programming schedule and to	Column 11 lines 32-39.	By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75. By comparing identification signals on the incoming programming with the programming schedule ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
transmit said first information transmission according to said programming schedule.	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
		programming.		<p>been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>	<p>Appendix A</p>
	<p>Column 11 lines 50-57.</p>	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87.</p> <p>controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to</p>	

Claim language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
Appendix A		
		matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
Independent Claim 70.		
A method of communicating a signal comprising the steps of:		
	Column 10 lines 15-23.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...
inputting a signal to	Column 10 lines 61-64.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
a switch at	Column 10 lines 41-42.	...a conventional matrix switch, 75, well known in the art,...
a transmission station,	Column 10 lines 24-28.	Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
said signal including an identifier and	Column 11 lines 38-39.	Computer, 73, monitors incoming programming by means of the aforementioned

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
					<p>dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>So far this disclosure has described an intermediate transmission station that transmits conventional television programming....</p> <p>Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's</p>
one of video and audio,	Column 12 lines 57-58.	This particular embodiment describes a transmission facility transmitting only television programming.	Page 84 lines 26-28.		
said switch having a plurality of output channels;	Column 10 lines 40-47.	All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field	Page 28 lines 26-27. Page 49 lines 26-27. Page 339 lines 9-11. Page 324 line 31 to page 325 line 4.		

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490, filed November 3, 1981.	Support to instant specification filed June 6, 1995
References	Language	Language
Appendix A		
	distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.
comparing said identifier to a predetermined datum to determine one of (i) a time to transmit said signal and	Column 11 lines 38-43.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
		SPAM signals are generated at original transmission stations or intermediate transmission stations or embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ...
		Meter-monitor segments contain meter information and/or monitor information.
		Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program
(ii) whether to delay transmission of said signal;	Column 11 lines 57-60.	Page 327 line 35 to page 328 line 13. Page 84 lines 26-28. Page 28 lines 26-27. Page 49 lines 26-27. Page 329 line 2-20.
	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission,...	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
	Language	Language
		Appendix A
selecting a storage location; and communicating said signal to said selected storage location.	<p>Column 11 lines 60-61.</p> <p>Column 11 lines 61-64.</p>	<p>unit identification code" information. ... Receiving said message causes computer, 73, to determine, ... that said "code" information matches ... schedule information of programming that is scheduled to be ... transmitted to the field system, 93, at a later time. So determining causes computer, 73, ... to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.</p> <p>So determining causes computer, 73, ... to select a video recorder/player, 76 or 78; ... in its preprogrammed fashion, ... to ... record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.</p>
<p>Dependent Claim 71.</p> <p>The method of claim 8, wherein said control signal is for controlling transmission of said first information to a programming schedule and</p>	<p>... controller/ computer, 73, selects a video recorder/player, 76 or 78, ...</p> <p>... in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...</p> <p>These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. ...</p> <p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p> <p>Column 4 lines 5-9.</p> <p>Column 11 lines 38-43.</p>	<p>The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62,</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981:	Support to instant specification filed June 6, 1995:
Language	Language	Language
	Column 11 lines 50-57.	and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
	... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to
		Page 84 lines 26-28.
		Page 28 lines 26-27.
		Page 49 lines 26-27.
		Page 328 line 22 to page 329 line 1.

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	References	Language
<p>logging of transmission of said first information transmission.</p>	<p>Column 12 lines 45-53.</p>	<p>Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs.</p>	<p>that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.</p>
<p>Dependent Claim 72.</p> <p>The method of claim 8, wherein said control signal is for controlling transmission of said first information transmission according to a programming schedule and</p>	<p>Column 4 lines 5-9.</p> <p>Column 11 lines 38-43.</p>	<p>Page 13 lines 25-28.</p> <p>Page 327 line 35 to page 328 line 13.</p>	<p>The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system,</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

	74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.		71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
		Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
		Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
		Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion,

Claim Language	Support to Applicants' U.S. Pat. No. 4,990,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
<p>generation of statistics of said first information transmission.</p>	<p>Column 15 lines 27-30.</p> <p>FIG 5 illustrates methods for monitoring reception and operation which methods can be used to gather statistics on programing usage and associated uses of other data transmissions and equipment.</p>	<p>Page 312 line 33 to page 313 line 8.</p> <p>Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local apparatus receives programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing</p> <p>[Signal processor 200 in Fig. 7 and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage.</p> <p>In addition, because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, ...</p> <p>... monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen Company) that collect statistics on viewership and programming usage.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission</p>
	<p>Column 18 lines 29-41.</p> <p>FIG. 6B also shows signal processor, 200, monitoring for a data gathering and ratings service.</p> <p>TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals</p>	<p>Page 28 lines 25-29.</p> <p>Page 411 lines 10-11.</p> <p>Page 88 lines 19-22.</p> <p>Page 408 lines 18-29.</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. References	Support to instant specification filed June 6, 1995. References	Language
		<p>that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...</p>	<p>and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above escribed fashion.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor</p>
		<p>The processors, 204 and 210, transfer this information to signal processor, 200, ...</p>	<p>Page 414 lines 13-27.</p> <p>Page 15 lines 16-22.</p> <p>Page 36 lines 32-33.</p> <p>Page 38 lines 11-14.</p> <p>Page 411 lines 10-15.</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
		<p>information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in ...</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to</p>
	<p>... for recording and subsequent transmission to a remote data collection site.</p>	<p>Page 418 line 23 to page 419 line 15.</p> <p>Page 411 line 28 to page 412 line 2.</p> <p>Page 173 line 30 to page 174 line 23 from example #3.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490, filed November 3, 1981	Support to instant specification filed June 6, 1995
References	Language	Language

Appendix A

			<p>buffer/comparator, 14, is called, hereinafter, the "1" monitor information (#3).")</p> <p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...</p>
		<p>Page 419 lines 4-15.</p> <p>Page 28 lines 25-35.</p> <p>Page 397 lines 17-20.</p>	
	<p>Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.</p>		
Dependent Claim 73.			
The method of claim 8, wherein said control signal is for controlling transmission of said first information to a programming schedule and	<p>Column 4 lines 5-9.</p> <p>Column 11 lines 38-43.</p>	<p>These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing, ...</p> <p>By comparing identification signals on the incoming programming with the programming</p>	<p>The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
	<p>schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel</p>
<p>Column 11 lines 50-57.</p>	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
Appendix A		
identification of content of said first information transmission.	Column 15 lines 57-62.	modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.
		Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.
		Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ...
Dependent		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

Claim 74. The method of claim 8, wherein said control signal is for controlling transmission of said first information to a programming schedule and	Column 4 lines 5-9. Column 11 lines 38-43.	These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. ... By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 13 lines 25-28. Page 327 line 35 to page 328 line 13.	The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
	Column 11 lines 50-57.	... if controller/computer, 73, determines	Page 328 line 22 to	For example, computer, 73, receives a given

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995
References	Language	Language

Appendix A

<p>output of an identifier of said first information transmission to a remote data collection station.</p>	<p>Column 12 lines 45-56.</p>	<p>that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>page 329 line 1.</p>	<p>SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
	<p>Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs. Signal processors, 71 and 96, can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively.</p>		<p>Page 337 lines 1-21.</p>	<p>Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Language	References	Language	Support to instant specification filed June 6, 1995.
References	Language	References	Language	References	Language
<p>Independent Claim 75.</p> <p>A method of processing a plurality of signals comprising the steps of:</p>					<p>Appendix A</p>
<p>inputting said plurality of signals at a transmission station,</p>	<p>Column 10 lines 61-64.</p>	<p>Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.</p>	<p>Page 324 lines 23-33.</p>	<p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire....</p>	<p>Federal Communications Commission requires broadcast station operators to maintain as station logs. And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.</p>
<p>each signal of said plurality of signals</p>	<p>Column 11 lines 3-5.</p>	<p>Signal processor, 71, has means, described above, to identify and separate the</p>	<p>Page 325 line 34 to page 326 line 7.</p>	<p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted</p>	<p>The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...</p>
	<p>Column 11 lines 21-24.</p>	<p>Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code ...</p>	<p>Page 326 lines 30-33.</p>	<p>Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995	Language
References	Language	Language	Language
comprising	instruction and information signals from their associated programming and ...	transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....	Appendix A
an identifier and	Column 11 lines 38-39.	<p>Page 59 lines 29-33.</p> <p>Page 327 line 35 to page 328 line 13.</p> <p>Page 84 lines 26-28.</p>	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in</p>

Claim Language	References	Language	References	Language	
	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.		
		Language	References	Language	
Appendix A					
at least one of video programming, audio programming and data programming;	Column 12 lines 57-61.	This particular embodiment describes a transmission facility transmitting only television programming. The facility could also process and transmit radio programming and other electronic data according to the methods described here ...	Page 28 lines 26-27. Page 49 lines 26-27. Page 339 lines 9-26.	television or radio or other programming transmissions monitor information that identifies what programming is available, Meter-monitor segments contain meter information and/or monitor information. So far this disclosure has described an intermediate transmission station that transmits conventional television programming; however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...	
	inputting said plurality of signals to	Column 10 line 66 to Column 11 line 1.	One is the conventional path whereby programming has flowed and continues to flow to recording devices, 76 and 78, and/or to flow to field distribution system, 93.	Page 325 lines 21-24.	One path is the conventional path whereby programming flows from each given receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, to matrix switch, 75.
	a switch having	Column 10 lines 41-42.	... connect, by means of conventional switches (here matrix switch, 75), to ...	Page 324 line 34.	... a conventional matrix switch, 75, well known in the art, ...
a plurality of output channels;	Column 10 lines 40-47.	All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	Page 324 line 31 to page 325 line 4.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	
processing each of said	Column 11 lines 3-5.	Signal processor, 71, has means, described	Page 325 line 34 to	At signal processor system, 71, which is a	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. References	Support to instant specification filed June 6, 1995. References	Language
<p>plurality of signals to</p> <p>determine (i) which of said at least one of video programming, audio programming and data programming is input to said switch and</p>	<p>above, to identify and separate the instruction and information signals from their associated programming and pass them, ...</p> <p>Column 11 lines 32-39.</p> <p>By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75. By comparing identification signals on the incoming programming with the programming schedule ...</p>	<p>page 326 line 10.</p> <p>Page 327 line 35 to page 328 line 13.</p> <p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p>	<p>Appendix A</p> <p>system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station; automatically adds, in a predetermined fashion, source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, ...</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, ...</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
(ii) when to transmit each of said plurality of signals;	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 328 lines 8-13. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
transmitting said plurality of signals to a processor in a distribution system, said processor having	Column 12 lines 45-47.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96,	Page 337 lines 1-8. Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96,
a plurality of output ports;	Column 11 lines 21-24. Column 7 lines 54-58.	Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code ... If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 326 lines 30-33. Page 31 lines 14-18. Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.
communicating said plurality of signals to at least one remote	Column 11 lines 30-31.	... transmit each program unit to cable field distribution system, 93.	Page 328 line 13. ... transmit the programming of each received program unit.

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995
References	Language	Language

Appendix A

location; determining that transmission of a specific signal of said plurality of signals should be delayed;	Column 11 lines 57-60.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission,...	Page 329 line 2-13.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information. ... Receiving said message causes computer, 73, to determine, ... that said "code" information matches ... schedule information of programming that is scheduled to be ... transmitted to the field system, 93, at a later time.
selecting a storage location; and communicating said specific signal to said selected storage location.	Column 11 lines 60-61. Column 11 lines 61-64.	... controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...	Page 329 lines 13-15. Page 329 lines 13-20.	So determining causes computer, 73, ... to select a video recorder/player, 76 or 78; in its preprogrammed fashion, ... to ... record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
Dependent Claim 76. The method of claim 8, wherein said control signal is for controlling identification of content of said first information transmission and for	Column 11 lines 32-39.	By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75. By comparing identification signals on the incoming programming with the programming schedule ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
controlling a switch to communicate said content.	<p>Column 11 lines 38-43.</p> <p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 327 line 35 to page 328 line 13.</p> <p>Page 84 lines 26-28.</p>	<p>Appendix A</p> <p>channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate television or radio or other programming transmissions....</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490, filed November 3, 1981	Support to instant specification filed June 6, 1995.
Reference	Language	Language

Appendix A

	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 28 lines 26-27. Page 49 lines 26-27. Page 328 line 22 to page 329 line 1.	... monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
Dependent Claim 77. The method of claim 8, wherein said control signal identifies is for controlling identification of content of said first information transmission and	Column 11 lines 32-39.	By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75. By comparing identification signals on the incoming programming with the programming schedule ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

delay of transmission of said content.			received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
		Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
		Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
		Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
	Column 11 lines 38-43.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
		Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to Instant specification filed June 6, 1995.	Appendix A
References	Language	Language	Language
	<p>Column 11 lines 57-65.</p> <p>Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.</p>	<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 329 line 2-22.</p>	<p>television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.</p>
<p>Dependent Claim 78.</p> <p>The method of claim 8, wherein said</p>	<p>Column 11 lines 38-43.</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Support to instant specification filed June 6, 1995.
Language	Language	Language	Language
control signal is for controlling selection of a storage location and	<p data-bbox="240 930 410 1350">schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p> <p data-bbox="1076 1402 1109 1633">Column 11 lines 57-61.</p> <p data-bbox="1084 951 1239 1371">Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/computer, 73, selects a video recorder/player, 76 or 78, ...</p>	<p data-bbox="760 709 792 909">Page 84 lines 26-28.</p> <p data-bbox="930 709 963 909">Page 28 lines 26-27.</p> <p data-bbox="1011 709 1044 909">Page 49 lines 26-27.</p> <p data-bbox="1092 720 1125 909">Page 329 line 2-15.</p>	<p data-bbox="248 128 272 264">Appendix A</p> <p data-bbox="264 128 492 636">dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p data-bbox="492 128 743 636">By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p data-bbox="768 128 914 636">SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p data-bbox="946 128 1003 636">... monitor information that identifies what programming is available, ...</p> <p data-bbox="1027 128 1084 636">Meter-monitor segments contain meter information and/or monitor information.</p> <p data-bbox="1109 128 1450 636">Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

storage of a portion of said first information transmitted storage selected storage location.	Column 11 lines 57-65.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 329 line 2-22.	preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78, ... Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.
Dependent Claim 79. The method of claim 8, wherein	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995
References	Language	Language
control signal is for	<p>schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
controlling delay of transmission of said first information transmission.	<p>Column 11 lines 57-65.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 329 line 2-22.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

				preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.
Independent Claim 80.				
A method of processing signals in a system including	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	Page 324 lines 8-24.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...
a transmission station and	Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrates one instance of such use. Figure 3 illustrates the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.	Page 324 lines 18-21.	Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
a receiver station, said method comprising the steps of:	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. References	Language	Support to instant specification filed June 6, 1995. References	Language
		signal apparatus and methods described here can permit.		Appendix A
programming said receiver station to store user data and	Column 18 lines 46-48.	... microprocessor, 205, is programmed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 396 lines 8-10. Page 420 lines 3-6.	persons. Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples. The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.
select said signals on the basis of said user data;	Column 18 line 42.	Receiving Selected Information and/or Programming.	See generally page 419 line 33 to page 447 line 23. (Page 419 line 33 quoted herein.) Page 324 lines 23-33.	Automating U. R. Stations ... Receiving Selected Programming
inputting a programming signal and a	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.		The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
comparison signal at said transmission station, said comparison signal designating a transmission schedule;	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	References	Language	Language
References	References	References	References	Language	Language
			Page 84 lines 26-28. Page 28 lines 26-27. Page 49 lines 26-27.	By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available,.... Meter-monitor segments contain meter information and/or monitor information.	Appendix A
inputting said transmission schedule, said transmission schedule comprising for each of said signals at least two of:	Column 11 lines 21-22.	Such input information might include the cable television system's complete programming schedule,...	Page 326 lines 30-31.	Such input information can include the complete programming schedule of the station of Fig. 6,....	
(1) a transmission time;	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit,....	
(2) an identifier for one of a transmission frequency and an output network; and	Column 11 lines 28-31. Column 6 lines 26-30.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions	Page 326 line 33 to page 327 line 2. Page 29 lines 11-15.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit,.... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local	

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
		References		References	
		Language		Language	
				Appendix A	
(3) a signal identifier;		available to a local television antenna of conventional design. ...with each discrete unit of programming identified with a unique program code...		television antenna of conventional design. ...with each discrete unit of programming identified by its own "program unit identification code" information.	
Transmitting said programming signal and					
	Column 11 lines 22-24.			Page 326 lines 31-33.	
Transmitting said programming signal and		... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87. controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.		Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
said comparison signal from said transmission station	Column 4 lines 5-9.	These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing, ...		Page 13 lines 25-28.	The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.
in accordance with said transmission schedule	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming		Page 328 lines 8-13.	By comparing selected meter-monitor information of said message information with

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. Language References	Support to instant specification filed June 6, 1995. Language References	Appendix A
based on said comparison signal;		schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
selecting information detected in one of said programming signal and said comparison signal at said receiver station;	Column 18 lines 58-59. Column 9 lines 53-57.	Signal processor, 200, scans sequentially all channels. The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.	At the station of Fig. 7 and 7C, signal processor, 200, scans sequentially all channels at its switch, 1, mixer, 3, and decoder, 30, in the fashion of example #5. Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ... Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.
	Page 265 line 27 to Page 266 line 21.	Page 422 lines 23-25. Page 257 line 24 to page 258 line 19.	Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ... After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	References	Language	Support to instant specification filed June 6, 1995.	Language
			<p>This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.</p>	<p>Page 250 lines 13-17.</p>	<p>Appendix A</p> <p>MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synch command.</p> <p>Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...</p> <p>... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.</p>
comparing said selected information to said user data; and	Column 18 lines 56-58.	... signal processor, 200, to hold examples of the sought for unique signals in its buffer/ comparator, 8, and compare them with all incoming signals.	Page 37 lines 26-28.	<p>Page 263 lines 19-24.</p>	<p>The signal processor, 200, of said station is preprogrammed ... with particular news-items-of-interest information that includes identification information of the particular stocks in said portfolio....</p> <p>One company whose stock is preprogrammed at said microprocessor, 205, is the American Telephone and Telegraph Company whose stock is identified by particular binary information of "T". And among the news-items-of-interest information at said RAM is an instance of said binary</p>

Claim 1 language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995
References	Language	Language

Appendix A

			information of "T".
		Page 422 lines 33 to Page 423 line 4.	...said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information ...
	Column 18 lines 59-62.	When it identifies a signal of interest, it relays that information and the channel identifier, in this illustration, to microcomputer, 205.	...cause said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information ... Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5.
receiving a portion of an information transmission containing said programming signal and said comparison signal at said receiver station based on said step of comparing.	Column 18 lines 65-67.	...and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
Dependent Claim 81. The method of claim 8, wherein said control signal is for			
	Column 18 lines 56-58.	...signal processor, 200, to hold examples of the sought for unique signals in its buffer/ comparator, 8, and compare them	The signal processor, 200, of said station is preprogrammed ... with particular news-items-of-interest information that includes

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Language	Language	Language
controlling said second of said plurality of receiver stations to receive said first information transmission.	<p>with all incoming signals.</p> <p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...</p> <p>Column 19 lines 20-25.</p>	<p>identification information of the particular stocks in said portfolio....</p> <p>One company whose stock is preprogrammed at said microprocessor, 205, is the American Telephone and Telegraph Company whose stock is identified by particular binary information of "T". And among the news-items-of-interest information at said RAM is an instance of said binary information of "T".</p> <p>...said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information....</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) By contrast, the...</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Page 422 lines 33 to Page 423 line 4.</p> <p>Page 267 lines 20-28 from example #5:</p> <p>Page 435 lines 16-25.</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

			<p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13; ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said</p>
		Page 436 line 9 to page 437 line 3.	
		Page 439 lines 14-15.	
		Page 437 lines 1-6.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	References	Language
						Appendix A
					<p>please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p>	<p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p>
<p>Dependent Claim 82.</p> <p>The method of claim 8, wherein said control signal is for controlling transmission of said first information to a transmission schedule and for</p>	<p>Column 11 lines 38-43.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

		<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>The signal processor, 200, of said station is preprogrammed ... with particular news-items-of-interest information that includes identification information of the particular stocks in said portfolio....</p> <p>One company whose stock is preprogrammed at said microprocessor, 205, is the American Telephone and Telegraph Company whose stock is identified by</p>
	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	
	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	
<p>controlling said second of said plurality of receiver stations to store said first information transmission.</p>	<p>Column 11 lines 50-57.</p> <p>Column 18 lines 56-58.</p>	<p>Page 420 lines 6-20.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
		<p>Appendix A</p> <p>particular binary information of "T". And among the news-items-of-interest information at said RAM is an instance of said binary information of "T".</p> <p>...said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information....</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so</p>
<p>Column 19 lines 20-27.</p>	<p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week." ...</p>	<p>Page 422 lines 33 to Page 423 line 4.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Appendix A		
		<p>inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>... to cause selected apparatus of said</p>
		<p>Page 439 lines 14-15.</p> <p>Page 437 lines 1-6.</p> <p>Page 439 lines 9-15.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	References	Language	Language
				Appendix A	
<p>Dependent Claim 83.</p> <p>The method of claim 8, wherein said control signal is for controlling transmission of said first information transmission at a specific time and</p>	<p>Column 11 lines 38-43.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each</p>	<p>station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, ...</p> <p>... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

			received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
	Page 84 lines 26-28.		At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;
	Page 28 lines 26-27.		
	Page 49 lines 26-27.		
	Page 328 line 22 to page 329 line 1.		
	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.		
generation of information and output of information.	Column 11 lines 50-57.	Column 19 line 60 to column 20 line 1.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
Reference	Language	Language
Appendix A		
		<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p>
	<p>Page 37 line 26 to page 38 line 8.</p>	
	<p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p>	<p>Page 26 lines 4-11.</p>
Dependent Claim 84.		
The method of claim 8, wherein said control signal is for controlling generation of information to	<p>Column 19 line 60 to column 20 line 1.</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p>	<p>Page 25 line 34 to page 26 line 2.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p>
		<p>Page 37 line 26 to</p> <p>In each decoder, the controller, 39, 44, or</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

		page 38 line 8.	47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.	Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...
complete said first information transmission and output of said generated information with said first information transmission.	Column 19 lines 59-60.	Page 25 lines 33-34.	Then the host says, "And here is what your portfolio did."
Independent Claim 85. A method of	Column 10 lines 15-23.	Page 324 lines 8-24.	The signal processing apparatus outlined in

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
processing a plurality of signals in a system including			Appendix A		
a transmission station and	<p>FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.</p> <p>Column 10 lines 24-28.</p>	<p>FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...</p> <p>Page 324 lines 18-21.</p>	<p>FIGS. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...</p> <p>Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.</p>		
a receiver station, wherein said receiver station is remote from said transmission station, said method comprising the steps of:	<p>FIGS. 3A, 3B and 3C illustrates one instance of such use. Figure 3 illustrates the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.</p> <p>Column 17 lines 47-53.</p>	<p>Page 390 lines 30-35.</p>	<p>Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.</p> <p>Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.</p>		
programming said receiver station to store user data;	<p>In this example, microprocessor, 205, is programmed to hold a portfolio of stocks...</p> <p>Column 18 lines 45-47.</p>	<p>Page 420 lines 3-4.</p>	<p>The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks...</p>		
inputting said plurality of signals to said transmission station;	<p>Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.</p> <p>Column 10 lines 61-64.</p>	<p>Page 324 lines 23-33.</p>	<p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each</p>		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

			receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
inputting a transmission schedule associated with said plurality of signals,	Column 11 lines 21-22.	Page 326 lines 30-31.	Such input information can include the complete programming schedule of the station of Fig. 6,....
said transmission schedule identifying	Column 11 lines 38-43.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
		Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
		Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
		Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
a specific schedule for each of said plurality of signals, each said	Column 11 lines 28-31.	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
specific schedule designating for one of said plurality of signals at least two of:		program unit to cable field distribution system, 93.		channels and how the station should transmit the unit,....
(1) a transmission time;	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit,....
(2) one of a transmission frequency and an output network; and	Column 11 lines 28-31. Column 6 lines 26-30.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.	Page 326 line 33 to page 327 line 2. Page 29 lines 11-15.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit,.... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.
(3) an identifier;	Column 11 lines 22-24.	... with each discrete unit of programming identified with a unique program code...	Page 326 lines 31-33.	... with each discrete unit of programming identified by its own "program unit identification code" information.
transmitting one of said plurality of signals in accordance with said transmission schedule;	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995
References	Language	Language

Appendix A

causing said receiver station to store one of said plurality of signals	Column 18 lines 62-67.	In a predetermined fashion, either microcomputer, 205, or signal processor, 200, instructs tuner, 223, to set cable converter box, 222, to the proper channel, and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing.	Page 423 lines 11-13. Page 424 lines 2-9.	that output of matrix switch, 75, that outputs to modulator, 87. Receiving said message causes said controller, 20, to cause a selected cable converter box, 222, to receive the transmission identified by said channel mark; Then receiving a particular to-223 instruction from said control processor, 20A, causes controller, 20, to transmits particular instructions, via said control information transmission link, to said tuner, 223, thereby causing said tuner, 223, to tune its associated cable converter box, 222, the to the particular channel transmission of said multi-channel cable transmission that is identified by said channel mark. Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said A&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said A&T news item.)
based on said user data.	Column 18 lines 46-48.	... microprocessor, 205, is programmed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 3-6.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.
	Column 18 lines 58-62.	Signal processor, 200, scans sequentially all channels. When it identifies a signal of interest, it relays that information and the channel identifier, in this illustration, to	Page 422 line 23 to page 423 line 10.	At the station of Fig. 7 and 7C, signal processor, 200, scans sequentially all channels at its switch, 1, mixer, 3, and decoder, 30, in the fashion of example #5. In due course, one instance of said Select-

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	Language	Language
	microcomputer, 205.		<p>AT&T-News-Item message is detected at said decoder, 30, and inputted to the controller, 39, of said decoder, 30.</p> <p>Receiving said Select-AT&T-News-Item message causes said controller, 39, to transmit said message to the controller, 20, of said signal processor, 200. ... Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5.</p>
<p>Dependent Claim 86.</p> <p>The method of claim 8, wherein said control signal in for controlling transmission of said first information transmission according to a programming schedule and</p>	Column 11 lines 38-43.	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p>
	Page 327 line 35 to page 328 line 13.	Page 84 lines 26-28.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

processing of a response to information contained in said first information transmission.			... monitor information that identifies what programming is available, ...
	Column 11 lines 50-57.		Meter-monitor segments contain meter information and/or monitor information. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
	Column 19 lines 42-44.	Page 21 lines 20-24.	Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.
	Column 19 line 60 to column 20 line 1.	Page 25 line 34 to page 26 line 2.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;
		Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	References	Language
		<p>the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>	<p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p>
<p>Independent Claim 87.</p> <p>A method of communicating a plurality of signals in a network, said network including</p> <p>a transmission station</p>	<p>Column 10 lines 15-23.</p> <p>FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.</p> <p>Column 10 lines 24-28.</p>	<p>Page 26 lines 4-11.</p> <p>Page 324 lines 8-24.</p> <p>Page 324 lines 18-21.</p>	<p>The signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p> <p>The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...</p> <p>Fig. 6 illustrates Signal Processing</p>

Claim Language	References	Language	References	Language
Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995			Appendix A
<p>and</p> <p>a remote receiver station, said method comprising the steps of:</p>	<p>Column 17 lines 47-53.</p>	<p>instance of such use. Figure 3 illustrates the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.</p> <p>FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.</p> <p>Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.</p>	<p>Page 390 lines 30-35.</p>	<p>Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.</p> <p>Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.</p>
<p>inputting said plurality of signals at said transmission station;</p>	<p>Column 10 lines 61-64.</p>		<p>Page 324 lines 23-33.</p>	<p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...</p>
<p>inputting a communication schedule associated with said plurality of signals, said communication schedule designating for each signal of said plurality of signals at least two of:</p> <p>(1) a transmission time;</p>	<p>Column 11 lines 21-22.</p>	<p>Such input information might include the cable television system's complete programming schedule,...</p>	<p>Page 326 lines 30-31.</p>	<p>Such input information can include the complete programming schedule of the station of Fig. 6,....</p>
	<p>Column 11 lines 28-31.</p>	<p>Such input information might also indicate when and on which channel or channels</p>	<p>Page 326 line 33 to page 327 line 2.</p>	<p>Such input information can indicate when and how the station should expect to receive each</p>

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
		Language		References	
				Language	
				Appendix A	
(2) one of a transmission frequency and an output network; and		Column 11 lines 28-31.	the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 33 to page 327 line 2.	program unit, when and on which channel or channels and how the station should transmit the unit,....
		Column 6 lines 26-30.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 29 lines 11-15.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit,....
(3) a designation code;		Column 11 lines 21-24.	As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.		The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.
communicating each signal of said plurality of signals in accordance with said communication schedule;		Column 11 lines 30-31.	Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code ...	Page 326 lines 30-33.	Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information.
			... transmit each program unit to cable field distribution system, 93.	Page 328 line 13.	... transmit the programming of each received program unit.
inputting a portion of said plurality of signals to a computer at a time when		Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...	Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
				Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

specific information content does not exist;			<p>preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...</p> <p>And the Fig. 1C combining is displayed.</p> <p>TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p>
	Column 19 lines 67 to column 20 line 1.	<p>Page 24 lines 5-6.</p> <p>Page 451 lines 7-9.</p> <p>Page 451 line 3.</p> <p>Page 26 lines 8-10.</p>	
	Column 19 lines 48-53.	<p>The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay ...</p> <p>These signals instruct microcomputer, 205, to</p>	
		<p>generate several graphic video overlays, ...</p> <p>Page 451 lines 7-11.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	References	Language	Language
			Appendix A	
	and to transmit these overlays to TV set, 202,	Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.	
	upon command.	Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.	
		Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ... And the Fig. 1C combining is displayed.	
generating said specific information content	Column 19 lines 67 to column 20 line 2.	Page 451 line 3.	TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.	
in response to said inputted portion of said plurality of signals; and	Column 19 lines 42-44.	Page 21 lines 20-24.	Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.	
causing said receiver station to output said specific information content.	Column 19 line 64 to column 20 line 1.	Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A

				subscriber's own portfolio performance overlaid on the ...
Independent Claim 88.				
A method of generating information content in a network, said network including	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
a transmission station and	Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrates one instance of such use. Figure 3 illustrates the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.	Page 324 lines 18-21.	Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
a receiver station,	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
said receiver station being remote from said transmitter station, said method comprising the steps of:	Column 19 lines 20-23.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 396 lines 8-10. Page 435 lines 16-25.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples. In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ... Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	Language	Language
			<p>microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information ... and said ... enable-WSW-on-CC13 ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, ...</p> <p>...to receive the transmission of cable channel 13....</p>
inputting a control signal at said transmission station;	Column 11 lines 3-5.	Page 325 line 34 to page 326 line 10.	<p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68,</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

			69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station; automatically adds, in a predetermined fashion, source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, ...
inputting a schedule associated with said control signal, said schedule designating two of:	Column 11 lines 21-22.		Such input information can include the complete programming schedule of the station of Fig. 6,....
(1) a transmission time;	Column 11 lines 28-31.	Such input information might include the cable television system's complete programming schedule,...	Page 326 lines 30-31.
(2) one of a transmission frequency and an output network; and	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit,....
	Column 6 lines 26-30.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit,....
(3) an identifier;	Column 11 lines 21-24.	As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.	The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.
FIRST BRANCH communicating said control signal	Column 11 lines 50-57.	Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code ...	Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information.
		... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87,	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
in accordance with said schedule	<p>controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
at a time when	<p>... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>... said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
	<p>Column 11 lines 39-43.</p>	<p>Page 328 lines 9-13.</p>
	<p>Column 19 lines 45-49.</p>	<p>Page 326 lines 28-30.</p>
	<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...</p>	<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p>
	<p>Page 23 line 35 to page 24 line 4.</p>	<p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p>
	<p>Page 37 line 26 to page 38 line 8.</p>	<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43,</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
Appendix A		
information content does not exist;		and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
		Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...
		... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...
	Column 19 lines 67 to column 20 line 2.	And the Fig. 1C combining is displayed.
	Column 19 lines 48-53.	TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance ...
		Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
		...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining
		Page 24 lines 5-6.
		Page 451 lines 7-9.
		Page 451 line 3.
		Page 26 lines 8-11.
		Page 23 line 35 to page 24 line 16.
		Page 451 lines 7-11.
	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	
	These signals instruct microcomputer, 205, to	
	generate several graphic video overlays, ...	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
		<p>and to transmit these overlays to TV set, 202,</p> <p>upon command.</p>	<p>of Fig. 1C is merely the first.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...</p>
<p>SECOND BRANCH</p> <p>communicating said control signal</p>	<p>Column 11 lines 57-65.</p>	<p>Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.</p>	<p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
					Appendix A
in accordance with said schedule	Column 11 lines 39-43.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 328 lines 9-13.	system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming. ... said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	
at a time when	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...	Page 326 lines 28-30. Page 451 lines 6-7. Page 23 line 35 to page 24 line 4.	... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ... Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	Language	Language
<p>information content does not exist;</p> <p>FIRST BRANCH</p> <p>inputting said control signal to a computer based on said step of communicating;</p>			<p>Appendix A</p> <p>preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...</p> <p>During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.</p> <p>Executing the information of said intermediate generation set causes computer, 73, also to generate a ... video image...</p>
	<p>Column 19 line 53-56.</p> <p>Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.</p>	<p>Page 24 lines 5-6.</p> <p>Page 451 lines 7-9.</p> <p>Page 25 lines 26-33.</p>	
	<p>Column 12 lines 8-12.</p> <p>Were this head end facility equipped with automatic operating equipment well known in television studios, controller/computer, 73, could pass appropriate operating instructions to such equipment.</p>	<p>For example, page 365 line 22 to page 366 line 4.</p>	
	<p>Column 19 lines 45-49.</p>	<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...</p>	<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	References	Language	Support to instant specification filed June 6, 1995	Language
				Appendix A	
SECOND BRANCH inputting said control signal to a computer based on said step of communicating;	Column 10 lines 15-23. For example column 12 lines 26-29.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions. Decoders, 77 and 79, inform controller/computer, 73, what specific programming is loaded on recorder/players, 76 and 78 respectively, and what signals it contains.	Page 37 line 26 to page 38 line 8. Page 24 lines 5-6. Page 451 lines 7-9.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. Microcomputer, 205, evaluates the initial signal word or words which instruct it to the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...	
generating said	Column 19 line 53-56.	Subsequently in the program, the host says,	Page 324 lines 8-24. For example page 330 lines 5-15.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ... Computer, 73, has capacity for determining what programming is prerecorded on the magnetic tapes (or other recording media) loaded on the recorders, 76 and 78, ... Whenever programming is played on recorder, 76 or 78, decoder, 77 or 79 respectively, detects SPAM information embedded in the prerecorded programming played at the play heads of recorder, 76 or 78, and transmits said SPAM information to computer, 73. Said SPAM information can include ... "program unit identification code" ... During this time the program may show the	

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		References	
Language		Language		Language	
information content		"Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.			Appendix A so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M. And the Fig. 1C combining is displayed.
		Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
in response to said control signal, said information content including one of video and a graphic; and		Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified ... and transferred ... These signals instruct microcomputer, 205 ... to generate ... graphic video ...	Page 451 lines 6-7. Page 23 line 35 to page 24 line 4. Page 451 lines 7-10.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ... Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series: ... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate ... a plurality overlays.
FIRST BRANCH causing a signal generator one of		Column 12 lines 38-41.	... and signal generators, 82, 86, and 90, also well known in the art, that controller/computer, 73, can instruct to add signals to programming as required.	Page 354 lines 21-24.	... and signal generators, 82, 86, and 90, also well known in the art, that computer, 73, can cause to embed SPAM information as required.
(1) to add one of said control signal and		Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	References	Language
<p>said generated information content to an output containing television programming at said transmission station and (ii) to add said generated information content to an output containing television programming at said receiver station.</p> <p>SECOND BRANCH</p> <p>causing a signal generator one of (i) to add one of said control signal and said generated information content to an output containing television programming at said transmission station and</p>	<p>Column 19 line 53-56.</p>	<p>transmission.</p> <p>Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.</p>	<p>Page 25 lines 26-33.</p> <p>During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.</p>
<p>causing a signal generator one of (i) to add one of said control signal and said generated information content to an output containing television programming at said transmission station and</p>	<p>Column 19 line 64 to column 20 line 1.</p>	<p>This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p>	<p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Language	References	Support to instant specification filed June 6, 1995.	Language
(ii) to add said generated information content to an output containing television programming at said receiver station.	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 4-11.	received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance And the Fig. 1C combining is displayed. ... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.	Appendix A
Dependent Claim 89.	The method of claim 8, wherein said control signal is for controlling transmission of said first information transmission according to a programming schedule and	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 451 line 3.	And the Fig. 1C combining is displayed.
The method of claim 8, wherein said control signal is for controlling transmission of said first information transmission according to a programming schedule and	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

				Appendix A should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
output of said first information transmission at said second of said plurality of receiver stations.	Column 19 lines 20-25.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box,	Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
	201, to channel X ...	Appendix A
		microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) By contrast, the...
	Page 435 lines 16-25.	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p>
	Page 436 line 9 to page 437 line 3.	<p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

			<p>program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13; ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p>
		Page 439 lines 14-15.	
		Page 437 lines 1-6.	
		Page 439 lines 9-15.	
		Page 295 lines 6-8.	
		Page 439 lines 9-15.	
Dependent Claim 90.			
The method of claim 8, wherein said control signal is for	Column 20 lines 37-42.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200, ...	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ...

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	References	References	Language
controlling decryption of a portion of said first information transmission.		<p>to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...</p> <p>By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")</p> <p>... the information of said segments is encrypted prior to transmission ...</p> <p>The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ...</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example</p>	<p>Appendix A</p> <p>Page 281 lines 1-6.</p> <p>Page 282 line 2 to page 283 line 33.</p> <p>Page 478 lines 1-5.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

#4.)		
Dependent Claim 91. The method of claim 8, wherein said control signal is for controlling transmission of said first information to a schedule and	Column 11 lines 38-43.	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>
		<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
		<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p>
		... monitor information that identifies what programming is available, ...
		Meter-monitor segments contain meter information and/or monitor information.
		For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73,
	Page 327 line 35 to page 328 line 13.	
	Page 84 lines 26-28.	
	Page 28 lines 26-27.	
	Page 49 lines 26-27.	
	Page 328 line 22 to page 329 line 1.	
	Column 11 lines 50-57.	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
<p>output of said first information transmission as a portion of a multimedia presentation.</p>	<p>switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p> <p>Column 19 lines 20-29.</p> <p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>to determine, in a predetermined fashion, that said "code" information matches particular programmed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) By contrast, the ...</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
Appendix A		
		the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.
		Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.
		Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.
		Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.
		Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...
		... to cause selected apparatus of said station--cable converter box, 201, ... to
		Page 437 lines 1-6.
	Then, in a predetermined fashion, microcomputer, 205, may ...	
	... instruct tuner, 214, to switch box, 201, to channel X ...	
		Page 439 lines 9-15.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
		Appendix A
		receive the transmission of cable channel 13; ...
		Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...
	... and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week,"instructions causes controller, 20, ...; to switch power on to video recorder/player, 217, ...
	... and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, oncontroller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
	... and tuner, 215, to tune appropriately to "Wall Street Week."	...instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M,and to tune monitor, 202M, in a predetermined fashion.
		In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	References	References
Language	Language	Language
<p>said second of said plurality of receiver stations each identify content of said first information transmission by processing said control signal,</p> <p>said method further comprising the step of including an identifier in said control signal.</p>	<p>Column 19 lines 20-23.</p>	<p>programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995.
References	Language	Language
Appendix A		
		instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week"</i> <i>program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20. ...to receive the transmission of cable channel 13;...
	Page 439 lines 14-15.	
	Page 325 line 34 to page 326 line 10.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station; automatically adds, in a predetermined fashion, source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, ...
	Page 288 lines 16-20.	...microcomputer, 205, may also automatically substitute for local control, 225,
	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, ...	
Column 11 lines 3-5.		
... processor or monitor, 12, ... reacts, ... by passing also externally to		
Column 19 lines 17-20.		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
	microcomputer, 205, all signals that it passes to buffer/ comparator, 14.	in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.
		In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...
		All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
		In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...
		Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.
Column 11 lines 38-39.	By comparing identification signals on the incoming programming...	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62,

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

			<p>and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.</p>
	Page 84 lines 26-28.		
	Page 28 lines 26-27.		
	Page 49 lines 26-27.		
	Page 31 lines 14-18.		
	Column 7 lines 54-58.	<p>If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.</p>	
	Column 10 lines 15-23.	<p>The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.</p>	<p>The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...</p>
Independent Claim 93.			
A method of processing signals in a network including a transmitter station			

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
		References		References	
		Language		Language	
and a user station,		Column 20 lines 12-15.	FIG 6D illustrates one method for coordinating the presentation of information through the use of print with video. FIG 6D also illustrates possible uses of a decrypter and a local input.	Page 469 lines 3-6.	Fig. 7F illustrates a method for generating and communicating information to selected subscribers through the coordination of computers, television, and broadcast print. Fig. 7F also illustrates use of a local input, 225.
	said user station having a processor, said method comprising the steps of:	Column 20 lines 27-32.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, ...	Page 478 lines 1-5. Page 471 line 26 to page 472 line 17.	(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.) Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...
inputting a plurality of signals at said transmitter station,		Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and

Appendix A

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		References	
Language		Language		Language	
said plurality of signals including a programming signal and a processor instruction;		Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...	Page 325 line 34 to page 326 line 7.	59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire... At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....
inputting a schedule associated with said plurality of signals, said schedule including a designation for each of said plurality of signals of at least two of:		Column 11 lines 21-22.	Such input information might include the cable television system's complete programming schedule....	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
(1) a transmission time;		Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 lines 30-31.	Such input information can include the complete programming schedule of the station of Fig. 6....
(2) one of a		Column 11 lines 28-31.	Such input information might also indicate	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit....
			Such input information might also indicate	Page 326 line 33 to	Such input information can indicate when and

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

	head end facility should transmit the programming.		Fig. 6 should transmit the programming of each received program unit.
receiving said plurality of signals at said user station and	Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	Page 470 lines 1-3 and Page 470 lines 9-12. At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...
outputting programming contained in said programming signal;	Column 20 lines 27-29. Column 20 lines 19-23.	...a signal is identified in the incoming programming on TV set, 202, by decoder, 203,... Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input."	... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M. At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ... Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#".
inputting a user response to information contained in said programming signal; and	Column 20 lines 19-26.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input." The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, to hold and	Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Each subscriber--in particular,

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
	process further ...	Appendix A the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station. Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.
processing said user response in accordance with said processor instruction.	Column 20 lines 27-33. Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, ...	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information- and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for- entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause ...
Dependent Claim 94. The method of claim 92, wherein said identifier identifies one of television and radio programming, said	Column 11 lines 38-39. By comparing identification signals on the incoming programming...	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information,

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	References	Language	Support to instant specification filed June 6, 1995.	Language
method further comprising the step of				<p>received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>So far this disclosure has described an intermediate transmission station that transmits conventional television programming; however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...</p>	Appendix A
including said one of television and radio	Column 12 lines 57-61.	This particular embodiment describes a transmission facility transmitting only television programming. The facility could also process and transmit radio programming and other electronic data according to the methods described here ...	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 339 lines 9-26.</p>	<p>The station receives programming from many sources. Transmissions are received from a</p>	

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		References	
programming in said first information transmission.			antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.		Appendix A satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
		Column 12 lines 57-61.	This particular embodiment describes a transmission facility transmitting only television programming. The facility could also process and transmit radio programming and other electronic data according to the methods described here ...	Page 339 lines 9-26.	So far this disclosure has described an intermediate transmission station that transmits conventional television programming; however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...
Dependent Claim 95. The method of claim 92, wherein said identifier identifies one of video and audio, said method further comprising the step of					Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor
		Column 11 lines 38-39.	By comparing identification signals on the incoming programming...	Page 327 line 35 to page 328 line 13.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490, filed November 3, 1981	Language	References	Support to instant specification filed June 6, 1995	Language
Appendix A					
including said one of a datum and an instruction in said first information transmission.	<p>Column 17 line 44.</p> <p>Column 19 lines 60-65.</p>	<p>equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.</p> <p>... and transfer such signals to such equipment as directed.</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...</p>	<p>Page 95 lines 18-21.</p> <p>Page 25 line 33 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 26 line 4.</p>	<p>to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.</p> <p>Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to ... and to transfer said message to ...</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, ...</p>	
<p>Dependent Claim 97.</p> <p>The method of</p>	<p>Column 11 lines 3-5.</p>	<p>Signal processor, 71, has means, described</p>	<p>Page 325 line 34 to</p>	<p>At signal processor system, 71, which is a</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Support to instant specification filed June 6, 1995.
Language	Language	References	Language
claim 8, wherein said first of said plurality of receiver stations and said second of said plurality of receiver stations each monitor one of availability, use, and usage of content of said first information transmission, said method further comprising the step of	<p>above, to identify and separate the instruction and information signals from their associated programming and...</p> <p>...pass them, along with information identifying the channel source of each signal, externally to code reader, 72.</p> <p>Signal processor, 71, also has means to record said signals and transfer them to external communications network, 97.</p> <p>Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs. Signal processors, 71 and 96, can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively.</p>	<p>page 326 line 7.</p> <p>Page 326 lines 7-11.</p> <p>Page 326 lines 11-13.</p> <p>Page 337 lines 1-21.</p>	<p>Appendix A</p> <p>system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....</p> <p>...adds, ... source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.</p> <p>Signal processor system, 71, also has signal processor means to control signal processor system, 71,...</p> <p>Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Language	References	Support to instant specification filed June 6, 1995.	Language
	References			Appendix A	
	<p>Column 18 lines 29-41.</p>	<p>FIG. 6B also shows signal processor, 200, monitoring for a data gathering and ratings service.</p> <p>TV signal decoder, 203, and radio-signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...</p>	<p>Page 411 lines 10-11.</p> <p>Page 88 lines 19-22.</p> <p>Page 408 lines 18-29.</p> <p>Page 414 lines 13-27.</p> <p>Page 15 lines 16-22.</p>	<p>transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs. And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.</p> <p>In addition, because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, ...</p> <p>... monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen Company) that collect statistics on viewership and programming usage.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ...</p> <p>Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above escribed fashion.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ...</p> <p>Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
	Language	Language
		<p>input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause</p>
	<p>The processors, 204 and 210, transfer this information to signal processor, 200, ...</p>	<p>Page 36 lines 32-33.</p> <p>Page 38 lines 11-14.</p> <p>Page 411 lines 10-15.</p> <p>Page 418 line 23 to page 419 line 15.</p>
<p>... for recording and subsequent transmission to a remote data collection site.</p>		<p>Page 411 line 28 to page 412 line 2.</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Language	References	Support to instant specification filed June 6, 1995	Language
					Appendix A
				a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in ...	
				The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1 st monitor information (#3).")	
				In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.	
				[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote	
				Page 173 line 30 to page 174 line 23 from example #3.	
				Page 419 lines 4-15.	
				Page 28 lines 25-35.	
				Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
			<p>so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...</p> <p>Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local apparatus receives programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing</p> <p>[Signal processor 200 in Fig. 7 and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p>
including in one of said first information transmission and said second information transmission a portion of information to be processed that identifies said content of said first information transmission.	Column 11 lines 38-39.	<p>FIG 5 illustrates methods for monitoring reception and operation which methods can be used to gather statistics on programming usage and associated uses of other data transmissions and equipment.</p> <p>By comparing identification signals on the incoming programming ...</p>	<p>Page 397 lines 17-20.</p> <p>Page 312 line 33 to page 313 line 8.</p> <p>Page 28 lines 25-29.</p> <p>Page 327 line 35 to page 328 line 13.</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995.
References	Language	Language
References	Language	Language

Appendix A

			By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions
			... monitor information that identifies what programming is available,....
			Meter-monitor segments contain meter information and/or monitor information.
Independent Claim 98.			
A method of processing a plurality of signals in a system, wherein said system includes	Column 10 lines 15-23.		The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...
a transmission station and	Column 10 lines 24-28.		Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
a receiver station,	Column 17 lines 47-53.		Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	References	Language
said receiver station being remote from said transmitter station, said method comprising the steps of:	office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.	
	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.	
	Column 19 lines 20-23.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ... Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.	
		Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information ... and said ... enable-WSW-on-CC13 ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with	
		Page 396 lines 8-10.	
		Page 435 lines 16-25.	
		Page 436 line 9 to page 437 line 3.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981 References	Support to instant specification filed June 6, 1995. References	Language
Appendix A			
inputting to said system said plurality of signals, wherein said plurality of signals includes	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	<p>said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20. ...to receive the transmission of cable channel 13;...</p> <p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...</p>
multimedia signals, wherein said multimedia signals include	Column 12 lines 57-61.	This particular embodiment describes a transmission facility transmitting only television programming. The facility could also process and transmit radio programming and other electronic data according to the methods described here ...	<p>Page 439 lines 14-15.</p> <p>Page 324 lines 23-33.</p> <p>Page 339 lines 9-26.</p> <p>So far this disclosure has described an intermediate transmission station that transmits conventional television programming; however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...</p>
(i) one of video programming and audio programming and	Column 12 lines 57-58.	This particular embodiment describes a transmission facility transmitting only television programming.	<p>Page 339 lines 9-11.</p> <p>So far this disclosure has described an intermediate transmission station that transmits conventional television programming...</p>

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		Language	
Appendix A					
(ii) one of computer programming and programming to be printed;	Column 12 lines 58-61.	The facility could also process and transmit radio programming and other electronic data according to the methods described here ...	Page 339 lines 11-23.	... however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...	
	Column 18 lines 65-67.	...and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)	
inputting said multimedia signals to one of a switch and	Column 10 line 64 to column 11 line 3.	At distribution amplifiers, 63 through 70, each incoming feed is split into two paths. One is the conventional path whereby programming has flowed and continues to flow to recording devices, 76 and 78, and/or to flow to field distribution system, 93. The other path flows from each distribution amplifier, 63 through 70, individually to signal processor, 71.	Page 325 lines 17-27.	In line between each of the aforementioned receiver/ demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, and matrix switch, 75, is a dedicated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, that splits each incoming feed into two paths. One path is the conventional path whereby programming flows from each given receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, to matrix switch, 75. The other path inputs the transmission of said given receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, individually to signal processor system, 71.	
a processor at said	Column 10 lines 41-42.	...connect, by means of conventional switches (here matrix switch, 75), to ...	Page 324 line 34.	...a conventional matrix switch, 75, well known in the art, ...	
	Column 11 lines 3-14.	Signal processor, 71, has means, described	Page 325 line 34 to	At signal processor system, 71, which is a	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. References	Language	Support to instant specification filed June 6, 1995. References	Language
transmission station;		above, to identify and separate the instruction and information signals from their associated programming and pass them, along with information identifying the channel source of each signal, externally to code reader, 72. ... Code reader, 72, passes the received signals, with channel identifiers, to cable program controller and computer, 73.	page 326 line 11.	Appendix A system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station, automatically adds, in a predetermined fashion source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.
controlling said one of a switch and a	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 326 lines 16-18. Page 328 line 22 to page 329 line 1.	Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		Language	
processor to communicate said multimedia signals to said receiver station according to	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Such input information can include the complete programming schedule of the station of Fig. 6,....</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73,</p>	
	a timing instruction;	Such input information might include the cable television system's complete programming schedule,...	Page 28 lines 26-27.		
	determining one of a programming kind and subject matter contained in said multimedia signals;	By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each	Page 49 lines 26-27. Page 326 lines 30-31.		

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
		<p>individual wire to matrix switch, 75.</p> <p>By comparing identification signals on the incoming programming with the programming schedule ...</p>		<p>determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>	<p>Appendix A</p>
<p>delaying one of processing and communication of a portion of said multimedia signals; and</p>	<p>Column 15 lines 52-56.</p>	<p>If a unit like the microcomputer can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have sufficient apparatus to monitor every channel and kind of transmission it can receive.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 317 lines 2-6.</p>	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>If a given intermediate or output apparatus can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have sufficient apparatus to monitor every channel and kind of transmission it can receive.</p>	
	<p>Column 19 lines 45-53.</p>	<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>... several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.</p>	<p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p>	<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
		<p>the first series.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>Appendix A</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."</p> <p>...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and</p>
	<p>These signals instruct microcomputer, 205, ...</p>	<p>Page 24 lines 5-16.</p>	
	<p>... to generate several graphic video overlays, ...</p> <p>... which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to ...</p>	<p>Page 451 lines 7-11.</p> <p>Page 19 line 29 to page 20 line 20.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
	... transmit these overlays to TV set, 202, ...	for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.
	... upon command.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
		A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.
		(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes a subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
outputting a multimedia presentation based on said multimedia signals.	Column 19 line 67 to column 20 line 2.	TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
Dependent Claim 99.		
The method of	Column 11 lines 38-39.	Computer, 73, monitors incoming

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Support to instant specification filed June 6, 1995.
Language	Language	References	Language
<p>claim 97, wherein said portion of information is stored at a storage device.</p>	<p>incoming programming with the programming schedule ...</p>	<p>page 328 line 13.</p>	<p>Appendix A</p> <p>programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission</p>
<p>based on said step of encoding, said method further comprising the step of including said portion of information in said second information transmission before storing said control signal.</p>	<p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, along with information identifying the channel source of each signal, externally to code reader, 72. ...</p> <p>Code reader, 72, passes the received signals, with channel identifiers, to cable program controller and computer, 73.</p>	<p>Column 11 lines 3-14.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 325 line 34 to page 326 line 11.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995
References	Language	Language

Appendix A

				station, automatically adds, in a predetermined fashion source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.
			Page 326 lines 16-18.	Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73.
Dependent Claim 100. The method of claim 99, wherein said portion of information includes code which is operative to control a processor at each of said plurality of receiver stations.				
Dependent Claim 101. The method of claim 8, wherein one of said first of said plurality of receiver stations and said second of said plurality of receiver stations is				
	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...	Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station,....
			Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
programmed to process said control signal	Column 17 lines 62-64.	<p>apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above;....</p> <p>Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.</p>
	Column 9 lines 47-52.	<p>Page 397 lines 17-20.</p> <p>Page 248 line 17 to page 249 line 5.</p>
	<p>Signal processor, 200, is always operating and monitors all incoming channels.</p> <p>The controller, 20, is programmed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.</p>	<p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995.	Language	Language	Appendix A
References	References	References	Language	Language	Language
<p>based on one of a transmission location and time and further comprising a step of inputting said control signal to a storage device in a fashion which enables said storage device to output said control signal in said one of a transmission location and time.</p>	<p>Column 4 lines 5-6.</p> <p>Column 9 lines 53-55.</p>	<p>These techniques employ signals embedded in programs.</p> <p>The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.</p>	<p>Page 13 lines 25-26.</p> <p>Page 257 line 24 to page 258 line 19.</p> <p>Page 265 line 27 to Page 266 line 21.</p>	<p>predetermined television channel selection pattern: wireless channel 13.</p> <p>The present invention employs signals embedded in programming.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>A SPAM message is the modality whereby the</p>	<p>predetermined television channel selection pattern: wireless channel 13.</p> <p>The present invention employs signals embedded in programming.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>A SPAM message is the modality whereby the</p>
	<p>Column 19 lines 60-63.</p>	<p>At this point, an instruction signal is</p>	<p>Page 59 lines 29-33.</p>		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
	<p>generated in the television studio originating the programming and is transmitted in the programming transmission.</p>	<p>Appendix A</p> <p>original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p>
<p>Dependent Claim 102.</p> <p>The method of claim 101, wherein said one of said first of said plurality of receiver stations and said second of said plurality of receiver stations is programmed to process said control signal based on</p>	<p>Column 19 lines 43-44.</p>	<p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7.</p> <p>Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 21 lines 23-24.</p>
	<p>Column 17 lines 47-53.</p>	<p>Page 390 lines 30-35.</p> <p>Page 396 lines 8-10.</p>
	<p>FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.</p>	<p>Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.</p> <p>Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	References	Language
one of an interval of time and	Column 9 lines 53-55.	The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.		Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ... Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.	Page 257 line 24 to page 258 line 19.	
a predetermined time.	Column 11 lines 25-28.	Such input information might also indicate when and where the cable head end facility should expect to receive the programming.		Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ... After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.	Page 265 line 27 to Page 266 line 21.	
	Column 19 lines 8-9.	Microcomputer, 205, is preinformed of the time of cablecasting.		Such input information can indicate when and how the station should expect to receive each program unit,....	Page 326 lines 33-35.	
				Determining a match causes microcomputer, 205, automatically to input said please-fully-	Page 437 lines 1-3.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	References	Language
References	Language	References	Language	Appendix A
Independent Claim 103.				enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.
A method of processing signals in a network, said network including	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	Page 324 lines 8-24.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...
a transmitter station and	Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrates one instance of such use. Figure 3 illustrates the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.	Page 324 lines 18-21.	Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
a receiver station, said method comprising the steps of:	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
inputting a plurality of signals to	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		Language	
one of a switch and	Column 10 line 64 to column 11 line 3.	At distribution amplifiers, 63 through 70, each incoming feed is split into two paths. One is the conventional path whereby programming has flowed and continues to flow to recording devices, 76 and 78, and/or to flow to field distribution system, 93. The other path flows from each distribution amplifier, 63 through 70, individually to signal processor, 71.	Page 325 lines 17-27.	<p>receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...</p> <p>In line between each of the aforementioned receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, and matrix switch, 75, is a dedicated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, that splits each incoming feed into two paths. One path is the conventional path whereby programming flows from each given receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, to matrix switch, 75. The other path inputs the transmission of said given receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, individually to signal processor system, 71.</p> <p>...a conventional matrix switch, 75, well known in the art,...</p> <p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station, automatically adds, in a predetermined fashion source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.</p>	
	<p>Column 10 lines 41-42.</p> <p>Column 11 lines 3-14.</p>	<p>...connect, by means of conventional switches (here matrix switch, 75), to...</p> <p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, along with information identifying the channel source of each signal, externally to code reader, 72. ...</p> <p>Code reader, 72, passes the received signals, with channel identifiers, to cable program controller and computer, 73.</p>	<p>Page 324 line 34. Page 324 line 31 to</p> <p>Page 325 line 34 to page 326 line 11.</p>		

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	Language	Language
<p>multimedia signals, each of said multimedia signals including at least one of video, audio and data programming;</p>	<p>Column 12 lines 57-61.</p>	<p>This particular embodiment describes a transmission facility transmitting only television programming. The facility could also process and transmit radio programming and other electronic data according to the methods described here ...</p>	<p>Page 326 lines 16-18.</p> <p>Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73.</p> <p>So far this disclosure has described an intermediate transmission station that transmits conventional television programming; however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...</p>
<p>controlling said one of a switch and a computer to communicate said plurality of signals to said receiver station in accordance with a timing instruction;</p>	<p>Column 11 lines 38-57.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p> <p>Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78. If incoming programming is meant for immediate transmission, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer incoming programming to the proper output channel. For example, if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions</p>	<p>Page 327 line 35 to page 328 line 13.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p>
	<p>Page 84 lines 26-28.</p>		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	References	References	Language
		<p>inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, and can cause selected programming to be transmitted to field distribution system, 93, or recorded.</p> <p>Determining that particular incoming programming is scheduled for immediate retransmission can cause computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer said incoming programming to a scheduled output channel. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
decrypting one of said plurality of signals;	Column 12 lines 20-23.	(This particular embodiment could be expanded to include a decrypter, such as decrypter 10 in Fig. 1, in signals-only line between each decoder, 77, 79, 80, 84,	<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 14 to page 329 line 1.</p> <p>Page 327 lines 13-15.</p> <p>Computer, 73, monitors the operation of the head end station by means of TV signal decoders, 77, 79, 80, 84, and 88, each of which are shown in detail in Fig. 2A.</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
Appendix A		
	and 88, and controller/computer, 73.)	<p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Fig. 3A shows one such preferred controller, 39.</p> <p>As Fig. 3A shows, the preferred embodiment of controller, 39, also has a decryptor, 39K.</p>
passing said plurality of signals selectively to a processor at said receiver station; and	<p>TV signal decoder, 203, detects signals in the programming transmission on the channel which signals it transfers to monitor or processor, 204. Monitor or processor, 204, determines that certain signals are addressed to switch, 212, and transfers these signals to switch, 212.</p>	<p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of ... an execution segment of particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ...</p> <p>Said message is detected at said decoder, 203, and inputted to said controller, 39, ...</p>
	Monitor or processor, 204, also identifies signals addressed to tuner, 213, which it transfers accordingly. These signals instruct tuner, 213, to tune radio, 209, to the proper frequency for the simulcast.	<p>Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.</p>
outputting a multimedia presentation at said receiver station based	Automatically, by turning TV set, 202, to the channel with a stereo simulcast, the person has activated the stereo simulcast.	<p>Receiving said message causes said controller, 44, ... to ... tune radio, 209, to the frequency, ...</p> <p>Thus switching power on to TV set, 202, and selecting channel 13 at television tuner, 215, are the only manual steps necessary to</p>

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		References	
Language		Language		Language	
on said multimedia signals.				actuate the radio simulcast of said channel at radio, 209.	
Dependent Claim 104.					
The method of claim 101, wherein said one of said first of said plurality of receiver stations and said second of said plurality of receiver stations is	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.		Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
	Column 11 lines 21-24.	Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code ...		Page 396 lines 8-10.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
	Column 19 lines 42-43.	Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to ...		Page 326 lines 30-33.	Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information.
	Column 9 lines 47-52.	The controller, 20, is programmed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.		Page 450 lines 31-32.	... caused his microcomputer, 205, to be preprogrammed as described above;
programmed to process said control signal				Page 21 lines 20-23.	Microcomputer, 205, is preprogrammed to ... respond ... to ...
				Page 248 line 17 to page 249 line 5.	Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
based on a location in said first information transmission.	Column 11 lines 38-39.	channel 9, wireless channel 13, then to repeat said pattern.
	By comparing identification signals on the incoming programming...	<p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p>
		<p>Page 257 line 24 to page 258 line 19.</p> <p>Page 327 line 35 to page 328 line 13.</p>
		<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490, filed November 3, 1981	Support to instant specification filed June 6, 1995
References	Language	Language

Appendix A

			<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 21 lines 23-24.</p>	<p>SPAM signals are generated at original transmission stations or intermediate television or radio or other programming transmissions....</p> <p>...monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p>
Dependent Claim 105.				
The method of claim 104, further comprising the step of embedding said control signal in said first information transmission.	Column 19 lines 43-44.	<p>...instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.</p>	<p>Page 59 lines 29-33.</p> <p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7.</p> <p>Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p>	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p>
	Column 4 lines 5-6.	These techniques employ signals	Page 13 lines 25-26.	The present invention employs signals

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. References	Language	Support to instant specification filed June 6, 1995. References	Language
	Column 11 lines 38-39.	<p>embedded in programs.</p> <p>By comparing identification signals on the incoming programming...</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Appendix A</p> <p>embedded in programming.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week"</p>
			<p>Page 84 lines 26-28.</p>	
			<p>Page 28 lines 26-27.</p>	
	<p>Column 19 lines 43-44.</p>	<p>...instruction signals embedded in the "Wall Street Week" programming transmission.</p>	<p>Page 49 lines 26-27.</p>	
	<p>Column 9 lines 55-57.</p>	<p>This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.</p>	<p>Page 21 lines 23-24.</p>	
			<p>Page 250 lines 13-17.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Support to instant specification filed June 6, 1995.	Language
	References	Language	References	Language
			<p>Page 251 lines 8-11.</p> <p>Page 263 lines 19-24.</p> <p>Page 37 lines 26-28.</p> <p>Page 31 lines 10-14.</p>	<p>Appendix A</p> <p>program which is the message of the first combining synch command.</p> <p>Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...</p> <p>... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.</p> <p>Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both.</p>
<p>Dependent Claim 106.</p> <p>The method of claim 104, further comprising the step of performing said step of encoding</p>	<p>Column 7 lines 50-54.</p> <p>Column 19 lines 60-63.</p>	<p>Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both.</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.</p>	<p>Page 59 lines 29-33.</p> <p>Page 25 line 34 to page 26 line 1.</p>	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	References	Language
						Appendix A
before	<p>Column 19 lines 43-44.</p> <p>Column 19 lines 45-49.</p>	<p>...instruction signals embedded in the "Wall Street Week" programing transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...</p>	<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 21 lines 23-24.</p> <p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-6.</p> <p>Page 451 lines 7-9.</p> <p>Page 25 lines 26-33.</p>	<p>.... monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...</p> <p>During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market</p>		
a portion of said first information transmission is	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio				

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
		Language		Language	
communicated to said storage device.		generated graphic is pictured.		Appendix A over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.	
Dependent Claim 107.					
The method of claim 8, further comprising the step of:					
including in one of said first information transmission and said control signal a first portion of information which		Column 7 lines 36-37.		Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.	
enables one of said plurality of receiver stations to		Column 7 lines 37-39.		<p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs</p> <p>Controller, 39, 44, or 47, is preprogrammed to receive units of signal information, to assemble said units into signal words that subscriber station apparatus can receive and process, and to transfer said words to said apparatus. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information,</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	References	Language
						Appendix A
select one of a second portion of information and a	Column 7 lines 54-58.	If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 156 line 33.	by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions a subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. Said controller, 39, 44, or 47, has one or more output ports for communicating signal information to said apparatus.	Fig. 3A shows one such preferred controller, 39.	
device to which to communicate a second portion of information.	Column 7 lines 54-58.	If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 157 lines 5-7.	Buffer, 39C, and processor, 39D, are the second buffer and processor and perform protocol conversion functions.		
			Page 14 lines 22-25.	In all cases, signals may convey information in discrete words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction.		
			Page 31 lines 14-18.	If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.		
			Page 31 lines 14-18.	If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A				
Independent Claim 108. A method of processing signals in a network, said network including a transmitter station and a receiver station, said method comprising the steps of:	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	Page 324 lines 8-24.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...
	Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrates one instance of such use. Figure 3 illustrates the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.	Page 324 lines 18-21.	Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
			Page 396 lines 8-10.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
	inputting a plurality of signals to	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Language	References	Support to instant specification filed June 6, 1995	Language
two of video, audio and data programming;	Column 12 lines 57-61.	This particular embodiment describes a transmission facility transmitting only television programming. The facility could also process and transmit radio programming and other electronic data according to the methods described here ...	Page 326 lines 16-18. Page 339 lines 9-26.	Code reader, 72, buffers and passes the received SPAM message information, with source mark information; to cable program controller and computer, 73. So far this disclosure has described an intermediate transmission station that transmits conventional television programming; however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...	Appendix A
controlling said one of a switch and a computer to communicate said plurality of signals to said receiver station in accordance with	Column 11 lines 38-57.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming. Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78. If incoming programming is meant for immediate transmission, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer incoming programming to the proper output channel. For example, if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches	Page 327 line 35 to page 328 line 13. Page 84 lines 26-28.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995	Language	Language
References	References	References	Language	Language
	<p>so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>transmissions....</p> <p>...monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, and can cause selected programming to be transmitted to field distribution system, 93, or recorded.</p> <p>Determining that particular incoming programming is scheduled for immediate retransmission can cause computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer said incoming programming to a scheduled output channel. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>Such input information can include the complete programming schedule of the station</p>	<p>Appendix A</p>	
<p>a timing instruction;</p>	<p>Column 11 lines 21-22.</p>	<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 14 to page 329 line 1.</p>		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	References	Language
passing said plurality of signals selectively to a processor at said receiver station;	Column 18 lines 14-19.	programming schedule, ... TV signal decoder, 203, detects signals in the programming transmission on the channel which signals it transfers to monitor or processor, 204. Monitor or processor, 204, determines that certain signals are addressed to switch, 212, and transfers these signals to switch, 212.		of Fig. 6, ... Periodically thereafter, said program originating studio embeds in said transmission and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of ... an execution segment of particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, ... Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.	Page 408 lines 18-29.	
	Column 18 lines 22-24.	Monitor or processor, 204, also identifies signals addressed to tuner, 213, which it transfers accordingly.		Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.	Page 408 lines 31-34.	
				Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to ... , and to transfer said message to So transferring said message is the controlled function that the information said header and execution segment cause controller, 39, to perform.	Page 95 lines 18-24.	
controlling said processor on the basis of information contained in said plurality of signals; and	Column 18 lines 17-19.	Monitor or processor, 204, determines that certain signals are addressed to switch, 212, and transfers these signals to switch, 212.		Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.	Page 408 lines 31-34.	
				Receiving the header and execution segment of said first message causes controller, 39, to	Page 95 lines 18-24.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

	Column 18 lines 22-24.	Monitor or processor, 204, also identifies signals addressed to tuner, 213, which it transfers accordingly.		Page 408 lines 31-34. Page 95 lines 18-24.	determine that said message is addressed to ... and to transfer said message to ... So transferring said message is the controlled function that the information said header and execution segment cause controller, 39, to perform. Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209. Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to ... , and to transfer said message to ... So transferring said message is the controlled function that the information said header and execution segment cause controller, 39, to perform.
outputting a multimedia presentation at said receiver station based on said multimedia signals.	Column 18 lines 26-28.	Automatically, by turning TV set, 202, to the channel with a stereo simulcast, the person has activated the stereo simulcast.		Page 411 lines 6-9.	Thus switching power on to TV set, 202, and selecting channel 13 at television tuner, 215, are the only manual steps necessary to actuate the radio simulcast of said channel at radio, 209.
Dependent Claim 109.					
The method of claim 107, further comprising the steps of:					
communicating said second portion of information to said storage device; and	Column 11 lines 3-14.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, along with information identifying the channel source of each signal, externally to code reader, 72. ... Code reader, 72, passes the received signals, with channel identifiers, to cable program controller and computer, 73.		Page 325 line 34 to page 326 line 11.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS

Claim Language	References	Language	References	Language
			Page 326 lines 16-18.	<p>apparatus of said intermediate transmission station, automatically adds, in a predetermined fashion source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.</p> <p>Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73.</p>
<p>storing said second portion of information at said storage device.</p>	<p>Column 11 lines 38-39.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule ...</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A

			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
Dependent Claim 110.				
The method of claim 109, wherein said device to which to communicate said second portion of information comprises a computer and	Column 11 lines 12-14.	Code reader, 72, passes the received signals, with channel identifiers, to cable program controller and computer, 73.	Page 326 lines 16-18.	Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73.
	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2. Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
said second portion of information includes a first instruction to be communicated to said computer, said method further comprising the step of including said second portion of information in said control signal.	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...	Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....
			Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A		
		consists of a series or stream of sequentially transmitted SPAM messages.
Column 11 lines 38-39.	By comparing identification signals on the incoming programming...	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
		SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
		... monitor information that identifies what programming is available,....
		Meter-monitor segments contain meter information and/or monitor information.
		Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...
Column 19 lines 60-66.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs	<p>Page 327 line 35 to page 328 line 13.</p> <p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 25 line 33 to page 26 line 2..</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A

		microcomputer, 205, to transmit the first overlay to TV set, 202, ...	Page 37 line 26 to page 38 line 8.	<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p>
Dependent Claim 111.	The method of claim 110, wherein signal content	Column 15 lines 57-62.	Page 315 lines 20-24.	<p>Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.</p> <p>Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490, filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Language	Language	Language

Appendix A

			subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.
		Page 49 line 26 to Page 50 line 4.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ...
	Column 4 lines 5-13.		The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. They occur at precise times in programming and can synchronize the operation of receiver station apparatus to the timing of programming transmissions. They can be conveniently monitored.
enables said one of said plurality of receiver stations to communicate to a remote station	Column 11 lines 8-10.	Page 326 lines 11-15.	Signal processor system, 71, also has signal processor means to control signal processor system, 71, to record meter-monitor information of said message information, and to transfer recorded information to external communications network, 97.
	Column 12 lines 54-56.	Page 337 lines 19-21.	And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995
References	Language	Language

Appendix A

Column 18 lines 29-41.	FIG. 6B also shows signal processor, 200, monitoring for a data gathering and ratings service.	Page 411 lines 10-11.	In addition, because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, ...
	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...	Page 88 lines 19-22.	... monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen Company) that collect statistics on viewership and programming usage.
		Page 408 lines 18-29.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above escribed fashion.
		Page 414 lines 13-27.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44.
		Page 15 lines 16-22.	The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. References	Support to instant specification filed June 6, 1995. References	Language
	<p>The processors, 204 and 210, transfer this information to signal processor, 200, ...</p> <p>... for recording and subsequent transmission to a remote data collection site.</p>	<p>Page 36 lines 32-33.</p> <p>Page 38 lines 11-14.</p> <p>Page 411 lines 10-15.</p> <p>Page 418 line 23 to page 419 line 15.</p> <p>Page 411 line 28 to page 412 line 2.</p>	<p>Appendix A</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in ...</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	References	Language
		Page 173 line 30 to page 174 line 23 from example #3.	The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1 st monitor information (#3).")
		Page 419 lines 4-15.	In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.
Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.		Page 28 lines 25-35.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
		Page 397 lines 17-20.	Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
information evidencing one of (i) receipt of a portion of said first information transmission and	Column 11 lines 8-10. Column 10 lines 61-64.	Page 326 lines 11-15. Page 324 lines 23-33.
	Signal processor, 71, also has means to record said signals and transfer them to external communications network, 97. Incoming programing transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Signal processor system, 71, also has signal processor means to control signal processor system, 71, to record meter-monitor information of said message information, and to transfer recorded information to external communications network, 97. The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
	Column 18 lines 38-41.	Page 28 lines 25-35.
	Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.

Appendix A

Claim Language	References	Language	References	Language
Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.			Appendix A
(ii) a function performed in response to a portion of said first information transmission, said method further comprising the step of including said signal content in one of said first information and said control signal.	<p>Column 12 lines 54-56.</p> <p>Column 12 lines 45-53.</p>	<p>Signal processors, 71 and 96, can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively.</p> <p>Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs.</p> <p>TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the</p>	<p>Page 397 lines 17-20.</p> <p>Page 337 lines 19-21.</p> <p>Page 337 lines 1-19.</p> <p>Page 408 lines 18-29</p>	<p>Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...</p> <p>And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.</p> <p>Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
	programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned,	Appendix A "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion. Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44. The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ... Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus. ... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.
		Page 414 lines 13-27
		Page 15 lines 16-22
	The processors, 204 and 210, transfer this information to signal processor, 200, ...	Page 36 lines 32-33.
		Page 38 lines 11-14.
		Page 411 lines 10-15

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	References	Language
		Page 418 line 23 to page 419 line 15.	Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.
... for recording and subsequent transmission to a remote data collection site.		Page 411 line 28 to page 412 line 2.	In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in
		Page 173 line 30 to page 174 line 23 from example #3.	The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synchron command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1 st " monitor information (#3).")
		Page 419 lines 4-15.	In the fashion described above, receiving said third transmission of monitor information ...

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
			<p>causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in</p>
	<p>Column 11 lines 38-39.</p>	<p>Page 28 lines 25-35.</p>	<p>Appendix A</p>
	<p>By comparing identification signals on the incoming programming ...</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in</p>
		<p>Page 84 lines 26-28.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
Appendix A		
		television or radio or other programming transmissions....
		... monitor information that identifies what programming is available,....
		Meter-monitor segments contain meter information and/or monitor information.
		In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C....
		Via a conventional multi-channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.
		Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...
		Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter-monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment) then meter-monitor segment information that
	Page 28 lines 26-27.	
	Page 49 lines 26-27.	
	Page 435 lines 16-18.	
	Page 248 lines 22-26 from example #5.	
	Page 250 lines 13-16 from example #5.	
	Page 252 lines 15-35 from example #5.	
	... pass all program and channel identifiers on all programming being cablecast on the multi-channel system.	
	Column 19 lines 14-15.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995.
References	Language	Language
Appendix A		
		includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...
	Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
		At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
		The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
	Page 25 line 34 to page 26 line 1.	
	Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

			page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	
Dependent Claim 112.				
The method of claim 111, wherein said first portion of information controls said one of said plurality of receiver stations and	Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion...	Page 30 lines 7-9.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion. Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs
	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
	References	References
	Language	Language
said signal content is communicated to said remote station, said method further comprising one step from the group consisting of:		Appendix A
		transmissions....
		... monitor information that identifies what programming is available, ...
		Meter-monitor segments contain meter information and/or monitor information.
		Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.
		Receiving said SPAM message causes said controller, 44, ... to ... tune radio, 209, to the frequency, ...
		Signal processor system, 71, also has signal processor means to control signal processor system, 71, to record meter-monitor information of said message information, and to transfer recorded information to external communications network, 97.
		And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.
	In addition, because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, ...	
	... monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen Company) that collect statistics on viewership and programming usage.	
	Periodically thereafter, said program originating studio embeds in said transmission	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

	that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...	and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above escribed fashion.
		Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44.
		The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...
	The processors, 204 and 210, transfer this information to signal processor, 200, ...	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.
		Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.
		... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
		<p>information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in ...</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synchronizing command, and said information transmitted to</p>
	<p>... for recording and subsequent transmission to a remote data collection site.</p>	<p>Page 418 line 23 to page 419 line 15.</p> <p>Page 411 line 28 to page 412 line 2.</p> <p>Page 173 line 30 to page 174 line 23 from example #3.</p>

Claim Language	References	Language	References	Support to instant specification filed June 6, 1995.
Claim Language	References	Language	References	Language

Appendix A

			<p>Page 419 lines 4-15.</p> <p>Page 28 lines 25-35.</p> <p>Page 397 lines 17-20.</p> <p>Page 315 lines 20-24.</p> <p>Page 44 lines 26-32.</p>	<p>buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3).")</p> <p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...</p> <p>Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.</p> <p>Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to</p>
including an identifier in said signal content;	Column 15 lines 57-62.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

		<p>... monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said</p> <p>please-fully-enable-WSW-on-CC13-at-particu</p>
	Page 28 lines 26-27.	
	Page 49 lines 26-27.	
	Page 267 lines 20-28 from example #5.	
	Page 435 lines 16-25.	
	Page 436 line 9 to page 437 line 3.	
Column 19 lines 20-23.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Language	Language	Language
		Appendix A
including said signal content in said first portion of information; and	<p>lar-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i></p> <p>Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13;...</p> <p>Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.</p> <p>Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.</p>	<p>Page 439 lines 14-15.</p> <p>Page 315 lines 20-24.</p> <p>Page 44 lines 26-32.</p>
	<p>The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.</p>	
	Column 15 lines 57-62.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

	Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion...	Page 49 line 26 to Page 50 line 4.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ...
			Page 30 lines 7-9.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.
			Page 36 line 32 to page 37 line 3.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs
including said first portion of information in said control signal.	Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion...	Page 30 lines 7-9.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.
			Page 36 line 32 to page 37 line 3.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs
	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...	Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said

Claim Language	References	Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.
						Appendix A
						transmission that are addresses to ITS apparatus of said intermediate transmission station;....
						A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
						The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information;....
						Cable program controller and computer, 73, is the central automatic control unit for the transmission station.
						...caused his microcomputer, 205, to be preprogrammed as described above;....
						Microcomputer, 205, is preprogrammed to ... respond ... to ...
						Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information. Such input information can indicate when and how the station should expect to receive each program unit,....
						Such input information can indicate when and
Dependent Claim 113.						
The method of claim 107, wherein said one of said plurality of receiver stations includes a computer and	Column 11 lines 15-17. Column 19 lines 42-43.		Cable program controller and computer, 73, is the central automatic control unit for the transmission facility. Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to...	Page 326 lines 19-20. Page 450 lines 31-32. Page 21 lines 20-23. Page 326 line 30 to page 327 line 2.		
a plurality of instructions program said computer to	Column 11 lines 21-31.		Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code (which in the case of advertising might be a purchase order number). Such input information might also indicate when and where the cable head end facility			

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

	<p>should expect to receive the programming. Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>... several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.</p>	<p>how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a</p>
Column 19 lines 45-53.	<p>These signals instruct microcomputer, 205, ...</p>	<p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-16.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

		... to generate several graphic video overlays, ...	Page 451 lines 7-11.	set of instructions that is loaded and run is called a "program instruction set."
		... which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to ...	Page 19 line 29 to page 20 line 20.	...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
		... transmit these overlays to TV set, 202, ...	Page 26 lines 4-8.	Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.
		... upon command.	Page 44 lines 14-17.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
			Page 26 lines 20-28.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

<p>respond to one of a command and a second instruction, said method further comprising the steps of:</p>	<p>Column 11 lines 38-43.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p>
			<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
			<p>Page 84 lines 26-28.</p>	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p>
			<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 23 line 35 to page 24 line 16.</p>	<p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
	several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	<p>Appendix A</p> <p>originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>... with information of the programming schedule, received earlier from input, 74,</p>
communicating said plurality of instructions	Column 11 lines 39-41.	<p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p> <p>Page 328 lines 9-10.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

to a storage device; and	remote site via network, 98, ...	and/or network, 98, ...
Column 19 lines 62-63	... and is transmitted in the programming transmission.	... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.
Column 19 lines 43-53.	... instruction signals embedded in the "Wall Street Week" programming transmission.	... embedded in the programming transmission, and transmitted.
	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, instruction signals embedded in the "Wall Street Week" programming transmission.
	... several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
		Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
		In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	These signals instruct microcomputer, 205, ...	Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the
		Page 326 lines 28-30.
		Page 25 line 35 to page 26 line 1.
		Page 21 lines 23-24.
		Page 451 lines 6-7.
		Page 23 line 35 to page 24 line 4.
		Page 37 line 26 to page 38 line 8.
		Page 24 lines 5-16.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
	Language	Language
		Appendix A
	<p>... to generate several graphic video overlays, ...</p> <p>... which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to ...</p> <p>... transmit these overlays to TV set, 202, ...</p> <p>... upon command.</p>	<p>contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p>
		<p>Page 451 lines 7-11.</p> <p>Page 19 line 29 to page 20 line 20.</p> <p>Page 26 lines 4-8.</p> <p>Page 44 lines 14-17.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Support to instant specification filed June 6, 1995.
References	Language	Language	Language

Appendix A

			Page 26 lines 20-28.	<p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p>
storing said plurality of instructions at said storage device.	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	<p>Page 59 lines 29-33.</p> <p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 327 line 35 to page 328 line 13.</p>	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73,</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
		Appendix A
		determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
		SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
		... monitor information that identifies what programming is available,....
		Meter-monitor segments contain meter information and/or monitor information.
Column 19 line 60 to column 20 line 1.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;
		In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of
		Page 84 lines 26-28.
		Page 28 lines 26-27.
		Page 49 lines 26-27.
		Page 25 line 34 to page 26 line 2.
		Page 37 line 26 to page 38 line 8.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
References	Language	Language

Appendix A

		<p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p>	<p>Page 26 lines 4-11.</p>	<p>forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p>
<p>Dependent Claim 114.</p> <p>The method of claim 8, wherein said control signal is for controlling said first of said plurality of receiver stations to transmit said first information transmission to said second of said plurality of receiver stations to</p>	<p>Column 11 lines 38-43.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Support to instant specification filed June 6, 1995.
Language	Language	Language	Language
<p>control said second of said plurality of receiver stations.</p>	<p>Column 11 lines 50-57.</p> <p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87.</p> <p>controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p> <p>Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p> <p>Page 450 lines 31-32.</p> <p>Page 21 lines 20-24.</p>	<p>Appendix A</p> <p>should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>...caused his microcomputer, 205, to be preprogrammed as described above; ...</p> <p>Microcomputer, 205, is preprogrammed to ... respond ... to instruction signals embedded in the "Wall Street Week" programming</p>

Claim Language	References	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Support to instant specification filed June 6, 1995.
Language	Language	Language	Language	Language
		<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>... several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.</p> <p>These signals instruct microcomputer, 205, ...</p>	<p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-6.</p>	<p>transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
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Appendix A

<p>Dependent Claim 115.</p> <p>The method of claim 13, wherein said at least one control signal is for controlling said first of said data receiver stations to compare said data to a programming schedule and to</p> <p>transmit said data according to said programming schedule.</p>	<p>Column 11 lines 32-39.</p> <p>Column 11 lines 38-43.</p>	<p>By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75.</p> <p>By comparing identification signals on the incoming programming with the programming schedule ...</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
			<p>Page 84 lines 26-28.</p>	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions...</p>
			<p>Page 28 lines 26-27.</p>	<p>... monitor information that identifies what programming is available, ...</p>
			<p>Page 49 lines 26-27.</p>	<p>Meter-monitor segments contain meter information and/or monitor information.</p>
		<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has</p>

Appendix A

		programming.		<p>been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to</p>
			Page 84 lines 26-28.	
			Page 28 lines 26-27.	
			Page 49 lines 26-27.	
		... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	
	Column 11 lines 50-57.			

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	References	Language	Appendix A
<p>Dependent Claim 116.</p> <p>The method of claim 13, wherein said at least one control signal is for controlling transmission of said data according to a programming schedule and</p>	<p>Column 4 lines 5-9.</p> <p>Column 11 lines 38-43.</p> <p>Column 11 lines 50-57.</p>	<p>These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. ...</p> <p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p> <p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted</p>	<p>Page 13 lines 25-28.</p> <p>Page 327 line 35 to page 328 line 13.</p> <p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p>	<p>The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p>	<p>matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>

Appendix A

		from TV receiver, 53, to the output that leads to modulator, 87.	<p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
logging of transmission of said data.	Column 12 lines 45-53.	<p>Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs.</p>	<p>Page 337 lines 1-19.</p>	<p>Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A		
		unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.
Dependent Claim 117.		
The method of claim 13, wherein said at least one control signal is for controlling transmission of said data according to a programming schedule and	Column 4 lines 5-9.	The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.
	Column 11 lines 38-43.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
		SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in

Appendix A

			television or radio or other programming transmissions....
		Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
		Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
	Column 11 lines 50-57.	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
generation of statistics pertaining to said data.	Column 15 lines 27-30.	Page 312 line 33 to page 313 line 8.	Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local apparatus receives programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing

Appendix A

			Page 28 lines 25-29.	[Signal processor 200 in Fig. 7 and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage.
			Page 411 lines 10-11.	In addition, because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, ...
			Page 88 lines 19-22.	... monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen Company) that collect statistics on viewership and programming usage.
			Page 408 lines 18-29.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above escribed fashion.
			Page 414 lines 13-27.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44.
			Page 15 lines 16-22.	The frequencies may convey television, radio, or other programming transmissions. The

Column 18 lines 29-41.

FIG. 6B also shows signal processor, 200, monitoring for a data gathering and ratings service.

TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...

Appendix A

		input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...	
	The processors, 204 and 210, transfer this information to signal processor, 200, ...	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.	Page 36 lines 32-33.
		Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.	Page 38 lines 11-14.
		... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.	Page 411 lines 10-15.
		Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.	Page 418 line 23 to page 419 line 15.
	... for recording and subsequent transmission to a remote data collection site.	In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause	Page 411 line 28 to page 412 line 2.

Appendix A

			<p>a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in ...</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1" monitor information (#3).")</p> <p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote</p>
		<p>Page 173 line 30 to page 174 line 23 from example #3.</p>	
		<p>Page 419 lines 4-15.</p>	
	<p>Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.</p>	<p>Page 28 lines 25-35.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490, filed November 2, 1981	Support to Instant Specification filed June 6, 1995
Reference	Language	Language

Appendix A

			<p>Page 397 lines 17-20.</p>	<p>so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...</p>
<p>Dependent Claim 118.</p> <p>The method of claim 13, wherein said at least one control signal is for controlling transmission of said data according to a programming schedule and</p>	<p>Column 4 lines 5-9.</p> <p>Column 11 lines 38-43.</p>	<p>These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing, ...</p> <p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 13 lines 25-28.</p> <p>Page 327 line 35 to page 328 line 13.</p> <p>Page 84 lines 26-28.</p>	<p>The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Support to instant specification filed June 6, 1995.	Language
				Appendix A
			transmission stations and embedded in television or radio or other programming transmissions....	
			... monitor information that identifies what programming is available, ...	
			Meter-monitor segments contain meter information and/or monitor information.	
			For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.	
			Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.	
			Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and	
identification of content of said data.	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 28 lines 26-27. Page 49 lines 26-27. Page 328 line 22 to page 329 line 1.	
	Column 15 lines 57-62.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.	Page 315 lines 20-24.	
			Page 44 lines 26-32.	

Appendix A

				<p>the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.</p> <p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <ul style="list-style-type: none"> ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ... 	<p>Page 49 line 26 to Page 50 line 4.</p>
Independent Claim 119.					
A method of processing multimedia signals in a network including	Column 10 lines 15-23.			<p>The signal processing apparatus outlined in Figs. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.</p>	<p>Page 324 lines 8-24.</p>
a transmission station and	Column 10 lines 24-28.			<p>FIGS. 3A, 3B and 3C illustrates one instance of such use. Figure 3 illustrates the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.</p>	<p>Page 324 lines 18-21.</p>
a receiver station, said receiver station having	Column 17 lines 47-53.			<p>FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS.</p>	<p>Page 390 lines 30-35.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	References	Language	Support to instant specification filed June 6, 1993	Language
	6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Column 19 lines 25-27.	Appendix A	and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.	
storage capacity for storing multimedia programming, said storage capacity including two of	...and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...	Column 19 lines 25-27.	Page 445 lines 24-27.	...instructions causes controller, 20, ...; to switch power on to video recorder/player, 217,....	
an optical disk player,	...instruction signals embedded in the "Wall Street Week" programming transmission.	Column 19 lines 43-44.	Page 446 lines 18-23.	...controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.	
	FIG 6E could be any home or commercial establishment but is described here as a book store. Using conventional laser videodisc equipment and techniques, well known in the art, a publisher has put his full line of books on laser discs in encrypted form and distributed one copy of each disc to each of his authorized book store retail outlets. He has also distributed to each a conventional computer floppy disk for use on conventional microcomputer, 205, that can operate conventional laser videodisc system, 232, in a predetermined fashion to locate and transmit individual titles in his line.	Column 21 lines 9-19.	Page 534 lines 13-16.	... Each farmer's laser disc player, 232, is loaded with a so-call "optical disk" on which is recorded a file named "PROPRIET.MOD" that contains encrypted information of a proprietary software module.	
a video recorder/player, and	...and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...	Column 19 lines 25-27.	Page 548 lines 24-30.	Automatically, under control of its specific received program instruction set, each microcomputer, 205, accesses the file, MY_FARM.DAT, that is prerecorded on the disk loaded at its A: disk drive and also accesses the encrypted "PROPRIET.MOD" file that is prerecorded at the laser disc player, 232, of each farmer's station....	
			Page 445 lines 24-27.	...instructions causes controller, 20, ...; to switch power on to video recorder/player, 217,....	
			Page 446 lines 18-23.	...controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.	

a computer, said method comprising:	Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
inputting to said network a plurality of signals, wherein	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
at least two of said plurality of signals are multimedia signals, each of said multimedia signals including one of video, audio and data programming,	Column 12 lines 57-61.	This particular embodiment describes a transmission facility transmitting only television programming. The facility could also process and transmit radio programming and other electronic data according to the methods described here ...	Page 339 lines 9-26.	So far this disclosure has described an intermediate transmission station that transmits conventional television programming; however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
<p>said multimedia signals further including an embedded identifier;</p>	<p>Column 4 lines 5-6.</p> <p>Column 11 lines 38-39.</p>	<p>in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...</p> <p>The present invention employs signals embedded in programming.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>...monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>In line between each of the aforementioned receiver/ demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, and matrix</p>
<p>inputting said plurality of signals to a switch and a processor at said</p>	<p>Column 10 line 64 to column 11 line 3.</p> <p>At distribution amplifiers, 63 through 70, each incoming feed is split into two paths. One is the conventional path whereby</p>	<p>Page 13 lines 25-26.</p> <p>Page 327 line 35 to page 328 line 13.</p> <p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 325 lines 17-27.</p>

Appendix A

transmission station;	Column 10 lines 40-45.	<p>programing has flowed and continues to flow to recording devices, 76 and 78, and/or to flow to field distribution system, 93. The other path flows from each distribution amplifier, 63 through 70, individually to signal processor, 71.</p> <p>All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, ...</p>	<p>switch, 75, is a dedicated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, that splits each incoming feed into two paths. One path is the conventional path whereby programming flows from each given receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, to matrix switch, 75. The other path inputs the transmission of said given receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, individually to signal processor system, 71.</p>
controlling said switch to communicate	Column 11 lines 38-57.	<p>By comparing identification signals on the incoming programing with the programing schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programing.</p> <p>Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78. If incoming programing is meant for immediate transmission, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer incoming programing to the proper output channel. For example, if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995
References	Language	Language

said plurality of signals to said receiver station according to timing instructions;	Column 11 lines 30-31.	... transmit each program unit to cable field distribution system, 93.	<p>Page 49 lines 26-27.</p> <p>Page 328 line 14 to page 329 line 1.</p>	<p>programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, and can cause selected programming to be transmitted to field distribution system, 93, or recorded.</p> <p>Determining that particular incoming programming is scheduled for immediate retransmission can cause computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer said incoming programming to a scheduled output channel. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>... each program unit, ... the station should transmit the unit, ...</p> <p>... transmit the programming of each received program unit.</p>
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Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Language
			Appendix A	... identifies the particular apparatus to which said signals are addressed, and outputs said signals to said apparatus ...
				A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ...
				Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205.
Column 18 lines 9-11.			Page 34 lines 24-26.	Fig. 7B illustrates automatic control of one kind of combined medium presentation—a stereo simulcast.
Column 19 lines 31-34.			Page 44 lines 14-15.	Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.
			Page 95 lines 18-21.	(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)
			Page 406 lines 34-35.	Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is
			Page 18 lines 24-27.	
			page 450 line 27 to page 451 line 11.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	References	Support to instant specification filed June 6, 1991	Language
	Column 20 lines 12-15.	FIG 6D illustrates one method for coordinating the presentation of information through the use of print with video. FIG 6D also illustrates possible uses of a decrypter and a local input.	<p>displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Fig. 7F illustrates a method for generating and communicating information to selected subscribers through the coordination of computers, television, and broadcast print. Fig. 7F also illustrates use of a local input, 225.</p> <p>Page 469 lines 3-6.</p> <p>Page 478 lines 1-5.</p>	<p>displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Fig. 7F illustrates a method for generating and communicating information to selected subscribers through the coordination of computers, television, and broadcast print. Fig. 7F also illustrates use of a local input, 225.</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above—for example, in the method of the first message of example #4.)</p>
delaying at least one of processing and communication of said multimedia signals in response to	Column 11 lines 57-65.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 329 line 2-22.	<p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. References	Language	Support to instant specification filed June 6, 1995. References	Language
one of said instruct-to-coordinate signal and	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, ...	Page 325 line 34 to page 326 line 10.	or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.
programming stored at said processor; and	Column 11 line 39.	with the programming schedule...	Page 328 lines 9-10.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station; automatically adds, in a predetermined fashion, source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, ...
presenting multimedia programming at said receiver station at one of a specific time and	Column 18 lines 26-28.	Automatically, by turning TV set, 202, to the channel with a stereo simulcast, the person has activated the stereo simulcast.	Page 411 lines 6-9.	... with information of the programming schedule.... Thus switching power on to TV set, 202, and selecting channel 13 at television tuner, 215, are the only manual steps necessary to actuate the radio simulcast of said channel at radio, 209.
a specific place in response to	Column 18 lines 9-11.	FIG. 6B illustrates a method for automatic co-ordination of a multimedia presentation in one place, in this case a stereo simulcast.	Page 406 lines 34-35.	Fig. 7B illustrates automatic control of one kind of combined medium presentation--a stereo simulcast.
said instruct-to-	Column 18 lines 14-17.	TV signal decoder, 203, detects signals in	Page 408 lines 18-29.	Periodically thereafter, said program

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995
References	Language	Language

Appendix A

coordinate signal,	the programming transmission on the channel which signals it transfers to monitor or processor, 204.		originating studio embeds in said transmission and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of a "01" header, an execution segment of particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the "program unit identification code" information of said particular television program, appropriate padding bits, an information segment that contains particular 104.1-MHz information, and an end of file signal. Said message is detected at said decoder, 203, and inputted to said controller, 39,
said multimedia programming contained in said multimedia signals.	Column 18 lines 26-28.	Page 411 lines 6-9.	Thus switching power on to TV set, 202, and selecting channel 13 at television tuner, 215, are the only manual steps necessary to actuate the radio simulcast of said channel at radio, 209.
Independent Claim 120.			
A method of processing signals	Column 19 lines 60-63.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
		Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
		Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995
References	Language	Language
to enable a plurality of receiver stations to function in different fashions,	Please see the two	page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.
each of said plurality of receiver stations having a processor, said method comprising the steps of:	Column 11 lines 12-14. Column 19 lines 5-8.	... buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73. The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.
receiving an information transmission and communicating said information transmission to a storage device;	Column 10 lines 40-43.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire to a conventional matrix switch, 75, well known in the art, that outputs to one or more recorder/players, 76 and 78, ...
With regard to the first station receiving a signal which is operative to cause	Column 11 lines 3-5.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said

Appendix A

Appendix A

			transmission that are addresses to ITS apparatus of said intermediate transmission station,....
		Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
		Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
		Page 28 lines 26-27.	... monitor information that identifies what programming is available,....
		Page 49 lines 26-27.	Meter-monitor segments contain meter

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	Language	Language
<p>each of said plurality of receiver stations to identify and process a portion of said information transmission, wherein said plurality of receiver stations one of</p>	<p>Column 11 lines 38-43.</p> <p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted</p>	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>information and/or monitor information.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations or embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular</p>
		<p>Page 327 line 35 to page 328 line 13.</p>	
		<p>Page 84 lines 26-28.</p>	
		<p>Page 28 lines 26-27.</p>	
		<p>Page 49 lines 26-27.</p>	
		<p>Page 328 line 22 to page 329 line 1.</p>	

Appendix A

<p>(i) process a portion of said information in different fashions and</p>	<p>Column 11 lines 57-65.</p>	<p>from TV receiver, 53, to the output that leads to modulator, 87.</p> <p>Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.</p>	<p>Page 329 line 2-22.</p>	<p>preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.</p>
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Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Language	References	Language
(ii) process different portions of said information transmission;	Column 12 lines 26-34.	Decoders, 77 and 79, inform controller/computer, 73, what specific programming is loaded on recorder/players, 76 and 78 respectively, and what signals it contains. (Among other signals, a program unit could contain signals that would inform controller/computer, 73, of the distance to the beginning and end of the program unit which signals would facilitate operation of recorder/ players such as 76 and 78.)	Page 330 lines 10-16 Page 330 line 5 to Page 331 line 3.	Appendix A Whenever programming is played on recorder, 76 or 78, decoder, 77 or 79 respectively, detects SPAM information embedded in the prerecorded programming played at the play heads of recorder, 76 or 78, and transmits said SPAM information to computer, 73. Said SPAM information can include not only "program unit identification code" information but also information regarding ... Computer, 73, has... capacity for positioning the start points (or other selected points) of program units at the play heads of said recorders. Whenever programming is played on recorder, 76 or 78, decoder, 77 or 79 respectively, detects SPAM information embedded in the prerecorded programming played at the play heads of recorder, 76 or 78, and transmits said SPAM information to computer, 73. Said SPAM information can include not only "program unit identification code" information but also information regarding of the distance from the point on the tape at which a given SPAM message is embedded to the point on the tape where the program unit begins and ends (or to any other selected point).... (Such distance information can be embedded as SPAM message information segment information anywhere in the programming that SPAM information can be embedded
With regard to the second receiving station receiving a signal which is operative to cause	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...	Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said

Appendix A

			<p>distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addressed to ITS apparatus of said intermediate transmission station;....</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available,....</p>
	Page 59 lines 29-33.		
	Page 327 line 35 to page 328 line 13.		
	Page 84 lines 26-28.		
	Page 28 lines 26-27.		

Claim Language	Support to Applicant's U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995
Reference	Language	Language

each of said plurality of receiver stations to identify and process a portion of said information transmission, wherein said plurality of receiver stations one of	Column 19 lines 17-23.	... processor or monitor, 12, ... reacts, ... by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	<p>Page 49 lines 26-27.</p> <p>Page 435 lines 16-18.</p> <p>Page 250 lines 13-17.</p> <p>Page 251 lines 15-16.</p> <p>Page 252 line 15 to page 253 line 2.</p>	<p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synch command.</p> <p>The control apparatus of decoder, 30, is preprogrammed to process ... monitor information</p> <p>Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message ... addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter-monitor segment immediately following said ... as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment) then meter-monitor segment information that includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, and said message is called,</p>
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Appendix A

Appendix A

			<p>hereinafter, the "1st-new-program-message (#5)".</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ...</p>
		Page 267 lines 20-28 from example #5.	
		Page 435 lines 16-25.	
		Page 436 line 9 to page 437 line 3.	
	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."		
Column 19 lines 23-29.			

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to Instant Specification filed June 6, 1995.
Reference	Language	Language

Appendix A

		<p>program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p>
		<p>Page 439 lines 14-15.</p> <p>Page 437 lines 1-6.</p>
	<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...</p>	<p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p>
Column 19 lines 45-49.		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490, filed November 3, 1981	Support to instant specification filed June 6, 1995
Reference	Reference	Reference
Language	Language	Language

Appendix A

		Page 445 lines 24-27.	... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, ...
		Page 446 lines 18-23.	... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
		Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...
		Page 445 line 35 to page 446 line 1.	... and to tune monitor, 202M, in a predetermined fashion.
(i) process a portion of said information in transmission in different fashions and	Column 19 lines 63 to column 20 line 2.	Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
		Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
		Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
		Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490, filed November 3, 1981	Support to instant specification filed June 6, 1995.
Language	Language	Language

Appendix A		
(ii) process different portions of said information transmission;	Column 19 lines 45-53.	preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
		Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...
		... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...
		Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...
		In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	These signals instruct microcomputer, 205,	Said signal instructs microcomputer, 205, at

Appendix A

	...	the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
		And the Fig. 1C combining is displayed.
		When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
	... to generate several graphic video overlays, ...	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
	... which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to ...	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	... transmit these overlays to TV set, 202, ...	Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490, filed November 3, 1981. Language	Support to instant specification filed June 6, 1995. Language	Appendix A
	... upon command.	Page 451 lines 7-11.	RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set." ...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
		Page 19 line 29 to page 20 line 20.	Microcomputer, 205, is a conventional microcomputer system ... for generating a computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.
		Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
		Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995
References	Language	Language

Appendix A

		Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
selecting one of the group consisting of:	Column 11 lines 57-64.	Page 329 line 2-20.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
(1) a time at which to communicate said signal; and	Column 11 lines 61-64.	Page 329 lines 13-20.	... in its preprogrammed fashion, ... to ... record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995
Reference	Language	Language

				Appendix A to said selected recorder, 76 or 78.
(2) a storage location to which to communicate said signal;	Column 11 lines 60-61.	... controller/ computer, 73, selects a video recorder/player, 76 or 78, ...	Page 329 lines 13-15.	So determining causes computer, 73, ... to select a video recorder/player, 76 or 78; ...
communicating said signal one of (i) at a selected time and (ii) to a selected storage location based on said step of selecting; and	Column 11 lines 57-64.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...	Page 329 line 2-20.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
storing said information transmission and said signal at said storage device, wherein said method processes signals to enable said plurality of receiver stations to function in different fashions.	Column 11 lines 64-65.	... and instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 329 line 15-16.	... to cause said selected recorder, 76 or 78, to turn on and record programming, ...
Dependent				

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490, filed November 3, 1981	Support to instant specification filed June 6, 1995
References	References	References
Language	Language	Language

Appendix A

Claim 121. The method of claim 13, wherein said at least one control signal is for controlling transmission of said data according to a programming schedule and	Column 4 lines 5-9. Column 11 lines 38-43.	These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. ... By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 13 lines 25-28. Page 327 line 35 to page 328 line 13. Page 84 lines 26-28. Page 28 lines 26-27. Page 49 lines 26-27. Page 328 line 22 to	The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information. For example, computer, 73, receives a given
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Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995
References	Language	Language

		<p>that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>page 329 line 1.</p>	<p>SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
<p>output of an identifier of said data to a remote data collection station.</p>	<p>Column 12 lines 45-56.</p>	<p>Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programing to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programing transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs. Signal processors, 71 and 96, can transmit such records of programing to remote sites via telephone or other data transfer networks, 97 and 99 respectively.</p>	<p>Page 337 lines 1-21.</p>	<p>Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programing transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programing transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programing transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S.</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490, filed November 3, 1981	Support to instant specification filed June 6, 1995.
Language	Language	Language

Appendix A

			Federal Communications Commission requires broadcast station operators to maintain as station logs. And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.
Dependent Claim 122.			
The method of claim 13, wherein said at least one control signal is for controlling identification of content of said data and for	Column 11 lines 32-39.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
	By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75. By comparing identification signals on the incoming programming with the programming schedule ...	Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
		Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
		Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995	Appendix A
References	Language	Language	Language
controlling a switch to communicate said content.	<p>Column 11 lines 38-43.</p> <p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p> <p>Column 11 lines 50-57.</p> <p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 327 line 35 to page 328 line 13.</p> <p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be</p>

Appendix A

			retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
Dependent Claim 123. The method of claim 13, wherein said at least one control signal is for controlling identification of one of said data and	Column 11 lines 32-39.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ...
	By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75. By comparing identification signals on the incoming programming with the programming schedule ...	Page 84 lines 26-28. Page 28 lines 26-27.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995
References	Language	Language

delay of transmission of said one of said data.	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 49 lines 26-27. Page 327 line 35 to page 328 line 13.	Meter-monitor segments contain meter information and/or monitor information. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
	Column 11 lines 57-65.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix	Page 329 line 2-22.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the

Appendix A

Appendix A

		switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.			added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular programmed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.
Dependent Claim 124. The method of claim 13, wherein said at least one control signal is for controlling selection of a storage location and	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.		Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490, filed November 3, 1981	Language	References	Support to instant specification filed June 6, 1995	Language
					Appendix A
				received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information. Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; ... Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said	
				Page 84 lines 26-28. Page 28 lines 26-27. Page 49 lines 26-27. Page 329 line 2-15.	
	Column 11 lines 57-61.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/computer, 73, selects a video recorder/player, 76 or 78, ...			
storage of one of said data at said selected storage location.	Column 11 lines 57-65.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the		Page 329 line 2-22.	

Appendix A

		designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.		message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78, to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.
Dependent Claim 125.	The method of claim 13, wherein at least one control signal is for	Column 11 lines 38-43.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995
Reference	Language	Language

controlling delay of transmission of one of said data.	Column 11 lines 57-65.	Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			... monitor information that identifies what programming is available, ...
			Meter-monitor segments contain meter information and/or monitor information.
			Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.
Dependent		Page 28 lines 26-27.	
		Page 49 lines 26-27.	
		Page 329 line 2-22.	

Appendix A

Appendix A

<p>Claim 126.</p> <p>The method of claim 13, wherein said at least one control signal is for</p> <p>controlling said second of said data receiver stations to receive one of said data.</p>	<p>Column 18 lines 56-58.</p> <p>Column 19 lines 20-25.</p>	<p>...signal processor, 200, to hold examples of the sought for unique signals in its buffer/ comparator, 8, and compare them with all incoming signals.</p> <p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...</p>	<p>Page 420 lines 6-20.</p> <p>Page 422 lines 33 to Page 423 line 4.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25.</p>	<p>The signal processor, 200, of said station is preprogrammed ... with particular news-items-of-interest information that includes identification information of the particular stocks in said portfolio....</p> <p>One company whose stock is preprogrammed at said microprocessor, 205, is the American Telephone and Telegraph Company whose stock is identified by particular binary information of "T". And among the news-items-of-interest information at said RAM is an instance of said binary information of "T".</p> <p>...said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information....</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) By contrast, the...</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p>
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References

Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.

Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.

Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, *which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.* Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and **determines a match** with said second instance.

Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.

...to receive the transmission of cable channel 13; ...

Determining a match causes microcomputer,

Appendix A

		<p>channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular programmed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>The signal processor, 200, of said station is preprogrammed ... with particular news-items-of-interest information that includes identification information of the particular stocks in said portfolio....</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p> <p>Page 420 lines 6-20.</p>	
	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87.</p> <p>controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>...signal processor, 200, to hold examples of the sought for unique signals in its buffer/ comparator, 8, and compare them with all incoming signals.</p>		
<p>controlling said second of said data receiver stations to store said data.</p>	<p>Column 11 lines 50-57.</p> <p>Column 18 lines 56-58.</p>			

				<p>One company whose stock is preprogrammed at said microprocessor, 205, is the American Telephone and Telegraph Company whose stock is identified by particular binary information of "T". And among the news-items-of-interest information at said RAM is an instance of said binary information of "T".</p> <p>...said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information....</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit</p>
			<p>Page 422 lines 33 to Page 423 line 4.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to</p>	
		<p>Column 19 lines 20-27.</p>	<p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...</p>	

Appendix A

		page 437 line 3.	<p>message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller,</p>
		Page 439 lines 14-15.	
		Page 437 lines 1-6.	

Appendix A

				<p>20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, ...</p> <p>... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p>	<p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p> <p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p>				
<p>Dependent Claim 128.</p> <p>The method of claim 13, wherein said at least one control signal causes said network to transmit said data at a specific time and to</p>	<p>Column 11 lines 38-43.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with</p>					

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490, filed November 3, 1981	Support to instant specification filed June 6, 1995
References	Language	Language

Appendix A

generate output			information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			... monitor information that identifies what programming is available, ...
			Meter-monitor segments contain meter information and/or monitor information.
			For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
	Column 11 lines 50-57.	Page 84 lines 26-28. Page 28 lines 26-27. Page 49 lines 26-27. Page 328 line 22 to page 329 line 1.	At this point, an instruction signal is generated
	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 25 line 34 to page	At this point, an instruction signal is generated
	Column 19 line 60 to		

Appendix A

information by processing said data.	column 20 line 1.	generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	26 line 2. Page 37 line 26 to page 38 line 8.	at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
		This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...
Dependent Claim 129.				
The method of claim 13, wherein	Column 19 line 60 to column 20 line 1.	At this point, an instruction signal is generated in the television studio	Page 25 line 34 to page 26 line 2.	At this point, an instruction signal is generated at said program originating studio, embedded

<p>said at least one control signal is for controlling generation of information to</p>	<p>originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p>	<p>Page 37 line 26 to page 38 line 8.</p>	<p>in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>
<p>complete content of said information and output of said generated information and said</p>	<p>Column 19 lines 59-60.</p>	<p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p> <p>Then the host says, "And here is what your portfolio did."</p>	<p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p> <p>Then the host says, "And here is what your portfolio did."</p>

content.				
Dependent Claim 130. The method of claim 13, wherein at least one control signal is for controlling said network to transmit said data according to a programming schedule and	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73,
			Page 84 lines 26-28.	
			Page 28 lines 26-27.	
			Page 49 lines 26-27.	
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix	Page 328 line 22 to page 329 line 1.	

Appendix A

<p>process a response to information contained in said data.</p>	<p>Column 19 lines 42-44.</p>	<p>switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>to determine, in a predetermined fashion, that said "code" information matches particular programmed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
<p>Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.</p>	<p>Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.</p>	<p>Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.</p>	<p>Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.</p>
<p>At this point, an instruction signal is generated in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p>	<p>At this point, an instruction signal is generated in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p>	<p>At this point, an instruction signal is generated in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p>	<p>At this point, an instruction signal is generated in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p>
<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ...</p>	<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ...</p>	<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ...</p>	<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ...</p>

Appendix A

		<p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p>	Page 26 lines 4-11.	<p>to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p>
<p>Dependent Claim 131.</p> <p>The method of claim 13, wherein said at least one control signal is for controlling transmission of said data according to a programming schedule and</p>	Column 11 lines 38-43.	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	Page 327 line 35 to page 328 line 13.	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in</p>

Appendix A

<p>output of said data at said second of said data receiver stations.</p>	<p>Column 11 lines 50-57.</p>	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Column 19 lines 20-25.</p>	<p>output of said data at said second of said data receiver stations.</p>
		<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Column 19 lines 20-25.</p>	<p>output of said data at said second of said data receiver stations.</p>
			<p>Page 267 lines 20-28 from example #5.</p>	<p>output of said data at said second of said data receiver stations.</p>
				<p>output of said data at said second of said data receiver stations.</p>

			<p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW</p>
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Appendix A

				Page 439 lines 14-15. Page 437 lines 1-6. Page 439 lines 9-15. Page 295 lines 6-8. Page 439 lines 9-15.	<p>-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13; ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p>
<p>Dependent Claim 132.</p> <p>The method of claim 13, wherein said at least one control signal is for controlling decryption of a portion of said data.</p>	Column 20 lines 37-42.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200, ...	Page 477 lines 8-23.	<p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of said stations ... control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...</p>	

Appendix A

		<p>... which, in a predetermined fashion, signal processor, 200, decrypts and transfers...</p> <p>... to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.</p>	<p>Page 281 lines 1-6.</p> <p>Page 282 line 2 to page 283 line 33.</p> <p>Page 478 lines 1-5.</p>	<p>By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")</p> <p>... the information of said segments is encrypted prior to transmission ...</p> <p>The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ...</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned</p>
Dependent Claim 133.	The method of claim 13, wherein said	Column 11 lines 38-43.	Page 327 line 35 to page 328 line 13.		

<p>at least one control signal causes said network to transmit said data according to a schedule and</p>	<p>schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel</p>
	<p>Page 84 lines 26-28.</p>	<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>
<p>Column 11 lines 50-57.</p>	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	

Appendix A

Appendix A

output said data as a portion of a multimedia presentation by processing said data.	Column 19 lines 20-29.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	<p>modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) By contrast, the ...</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW</p>
			<p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>

			<p>information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its</p>
	Then, in a predetermined fashion, microcomputer, 205, may ...	Page 437 lines 1-6.	
	... instruct tuner, 214, to switch box, 201, to channel X ...	Page 439 lines 9-15.	
		Page 295 lines 6-8.	

Appendix A

		... and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...	Page 445 lines 24-27.	... instructions causes controller, 20, ...; to switch power on to video recorder/player, 217, ...
		... and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on ...	Page 446 lines 18-23.	... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
		... and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...
		Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 446 lines 17-21.	... and to tune monitor, 202M, in a predetermined fashion.
Column 19 line 53-56.			Page 25 lines 26-33.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
Column 19 lines 67 to		The viewer then sees a microcomputer	Page 451 line 3.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
				And the Fig. 1C combining is displayed.

	column 20 line 2.	generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 8-11.	TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
Dependent Claim 134. The method of claim 13, wherein said first of said data receiver stations and	Column 11 lines 38-39.	By comparing identification signals on the incoming programming with the programming schedule ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
said second of said data	Column 19 lines 20-23.	Analyzing these identifier signals in a	Page 84 lines 26-28. Page 28 lines 26-27. Page 49 lines 26-27. Page 267 lines 20-28	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information. All eight of said messages are commands.

Appendix A

Appendix A

<p>receiver stations each identify content of said data by processing said at least one control signal,</p> <p>said method further comprising the step of including an identifier in said at least one control signal.</p>	<p>predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>from example #5.</p> <p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects</p>
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<p>Column 11 lines 3-5.</p>	<p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, ...</p>	<p>the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13,...</p>
<p>Column 19 lines 17-20.</p>	<p>... processor or monitor, 12, ... reacts, ... by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.</p>	<p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station; automatically adds, in a predetermined fashion, source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, ...</p> <p>...microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.</p>
<p>Page 439 lines 14-15.</p>	<p>Page 325 line 34 to page 326 line 10.</p>	<p>Page 288 lines 16-20.</p>

Appendix A

			<p>Appendix 7</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74,</p>
	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25 from example #5.</p> <p>Page 327 line 35 to page 328 line 13.</p>		
	<p>Column 11 lines 38-39.</p>	<p>By comparing identification signals on the incoming programming...</p>	

	Column 7 lines 54-58.	If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 31 lines 14-18.</p>	<p>and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>...monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.</p>
<p>Dependent Claim 135.</p> <p>The method of claim 134, wherein said identifier identifies one of television and radio programming, said method further comprising the step of</p>	Column 11 lines 38-39.	By comparing identification signals on the incoming programming...	Page 327 line 35 to page 328 line 13.	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74,</p>

<p>including said one of television and radio programming in said information transmission.</p>	<p>Column 10 lines 61-64.</p>	<p>Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.</p>	<p>Page 324 lines 23-33.</p>	<p>and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>...monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>So far this disclosure has described an intermediate transmission station that transmits conventional television programming; however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...</p> <p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by</p>
	<p>Column 12 lines 57-61.</p>	<p>This particular embodiment describes a transmission facility transmitting only television programming. The facility could also process and transmit radio programming and other electronic data according to the methods described here ...</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 339 lines 9-26.</p>	

	<p>Column 12 lines 57-61.</p> <p>This particular embodiment describes a transmission facility transmitting only television programming. The facility could also process and transmit radio programming and other electronic data according to the methods described here ...</p>	<p>Page 339 lines 9-26.</p>	<p>other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...</p> <p>So far this disclosure has described an intermediate transmission station that transmits conventional television programming; however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...</p>
<p>Dependent Claim 136.</p> <p>The method of claim 134, wherein said identifier identifies one of video and audio, said method further comprising the step of</p>	<p>Column 11 lines 38-39.</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>

Appendix A

			<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 339 lines 9-11.</p> <p>Page 324 lines 23-33.</p> <p>Page 339 lines 9-11.</p>	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>So far this disclosure has described an intermediate transmission station that transmits conventional television programming....</p> <p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire....</p> <p>So far this disclosure has described an intermediate transmission station that transmits conventional television programming....</p>
including said one of video and audio in said information transmission.	<p>Column 12 lines 57-58.</p> <p>Column 10 lines 61-64.</p> <p>Column 12 lines 57-58.</p>	<p>This particular embodiment describes a transmission facility transmitting only television programming.</p> <p>Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.</p> <p>This particular embodiment describes a transmission facility transmitting only television programming.</p>		
Dependent Claim 137.				
The method of claim 134, wherein said	Column 11 lines 38-39.	By comparing identification signals on the incoming programming...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned

<p>identifier identifies one of a datum and an instruction, said method further comprising the step of</p>			<p>Page 84 lines 26-28.</p>	<p>dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.</p> <p>Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to ... and to transfer said message to ...</p>
	<p>Column 7 lines 54-58.</p>	<p>If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.</p> <p>... and transfer such signals to such equipment as directed.</p>	<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 31 lines 14-18.</p>	
	<p>Column 17 line 44.</p>		<p>Page 95 lines 18-21.</p>	

Appendix A

Appendix A

including said one of a datum and an instruction in said data.	Column 19 lines 60-65.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...	<p>Page 25 line 33 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>
Dependent Claim 138.			Page 26 line 4.	Said signal instructs microcomputer, 205, ...
The method of claim 13, wherein said first of said data receiver stations and said second of said data receiver stations each monitor one of availability, use, and usage of content of said data, said method	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...	Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS

Appendix A

further comprising the step of	<p>Column 11 lines 6-7.</p> <p>Column 11 lines 8-10.</p> <p>Column 12 lines 45-56.</p>	<p>...pass them, along with information identifying the channel source of each signal, externally to code reader, 72.</p> <p>Signal processor, 71, also has means to record said signals and transfer them to external communications network, 97.</p> <p>Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs. Signal processors, 71 and 96, can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively.</p>	<p>Page 326 lines 7-11.</p> <p>Page 326 lines 11-13.</p> <p>Page 337 lines 1-21.</p>	<p>apparatus of said intermediate transmission station,....</p> <p>...adds, ... source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.</p> <p>Signal processor system, 71, also has signal processor means to control signal processor system, 71,...</p> <p>Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs. And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.</p>
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	<p>Column 18 lines 29-41.</p>	<p>FIG. 6B also shows signal processor, 200, monitoring for a data gathering and ratings service.</p> <p>TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...</p>	<p>Page 411 lines 10-11.</p> <p>Page 88 lines 19-22.</p> <p>Page 408 lines 18-29.</p> <p>Page 414 lines 13-27.</p> <p>Page 15 lines 16-22.</p>	<p>In addition, because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, ...</p> <p>... monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen Company) that collect statistics on viewership and programming usage.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ...</p> <p>Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above escribed fashion.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ...</p> <p>Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p>
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Appendix A

		<p>The processors, 204 and 210, transfer this information to signal processor, 200, ...</p> <p>... for recording and subsequent transmission to a remote data collection site.</p>	<p>Page 36 lines 32-33.</p> <p>Page 38 lines 11-14.</p> <p>Page 411 lines 10-15.</p> <p>Page 418 line 23 to page 419 line 15.</p> <p>Page 411 line 28 to page 412 line 2.</p>	<p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in ...</p>
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Appendix A

		<p>Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.</p>	<p>Page 173 line 30 to page 174 line 23 from example #3.</p>	<p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1" monitor information (#3).")</p>
			<p>Page 419 lines 4-15.</p>	<p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p>
			<p>Page 28 lines 25-35.</p>	<p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p>
			<p>Page 397 lines 17-20.</p>	<p>Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...</p>

Appendix A

<p>including in said information transmission a portion of information to be processed that identifies said content of said data.</p>	<p>Column 15 lines 27-30.</p>	<p>FIG 5 illustrates methods for monitoring reception and operation which methods can be used to gather statistics on programing usage and associated uses of other data transmissions and equipment.</p>	<p>Page 312 line 33 to page 313 line 8.</p>	<p>Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local apparatus receives programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing</p> <p>[Signal processor 200 in Fig. 7 and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
	<p>Column 11 lines 38-39.</p>	<p>By comparing identification signals on the incoming programing...</p>	<p>Page 327 line 35 to page 328 line 13.</p>	

			<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p>	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>
<p>Dependent Claim 139.</p> <p>The method of claim 138, wherein said portion of information is stored at said data storage device</p>	<p>Column 11 lines 38-39.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule ...</p>	<p>Page 327 line 35 to page 328 line 13.</p> <p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what</p>

<p>based on said step of transmitting.</p>	<p>Column 11 lines 3-14.</p>	<p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, along with information identifying the channel source of each signal, externally to code reader, 72. ... Code reader, 72, passes the received signals, with channel identifiers, to cable program controller and computer, 73.</p>	<p>Page 49 lines 26-27. Page 325 line 34 to page 326 line 11.</p>	<p>programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station, automatically adds, in a predetermined fashion source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.</p> <p>Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73.</p>
<p>Dependent Claim 140. The method of claim 139, wherein said portion of information includes code</p>	<p>Column 15 lines 57-60.</p>	<p>The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each.</p>	<p>Page 315 lines 20-24.</p>	<p>Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.</p> <p>Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and</p>

Appendix A

<p>which is operative to control said computer at each of said data receiver stations,</p>	<p>Column 11 lines 38-43.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 49 line 26 to page 50 line 20.</p>	<p>the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.</p> <p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <ul style="list-style-type: none"> ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what</p>
			<p>Page 327 line 35 to page 328 line 13.</p>	
			<p>Page 84 lines 26-28.</p>	
			<p>Page 28 lines 26-27.</p>	

Appendix A

	<p>Column 19 lines 17-23.</p>	<p>... processor or monitor, 12, ... reacts, ... by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 49 lines 26-27.</p> <p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and</p>
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Appendix A

<p>said method further comprising the step of including said code in said at least one control signal.</p>	<p>Column 11 lines 38-43.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 439 lines 14-15.</p> <p>Page 327 line 35 to page 328 line 13.</p>	<p>determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>
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Appendix A

<p>Dependent Claim 141.</p> <p>The method of claim 13, wherein one of said first of said data receiver stations and said second of said data receiver stations is</p>	<p>Column 11 lines 3-5.</p>	<p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...</p>	<p>Page 325 line 34 to page 326 line 7.</p>	<p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station,....</p>
	<p>Column 17 lines 62-64.</p>	<p>Signal processor, 200, is always operating and monitors all incoming channels.</p>	<p>Page 59 lines 29-33.</p>	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p>
<p>programmed to process said at least one control signal</p>	<p>Column 9 lines 47-52.</p>	<p>The controller, 20, is programmed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.</p>	<p>Page 248 line 17 to page 249 line 5.</p>	<p>Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above;....</p> <p>Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless</p>

Appendix A

			channel 9, wireless channel 13, then to repeat said pattern.
		Page 257 line 24 to page 258 line 19.	<p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p>
		Page 13 lines 25-26.	The present invention employs signals embedded in programming.
based on one of a transmission location and time, said method further comprising the step of outputting said signal in said one of a transmission location and time.	<p>Column 4 lines 5-6.</p> <p>Column 9 lines 53-55.</p>	<p>Page 257 line 24 to page 258 line 19.</p>	<p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p>

Appendix A

			<p>pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>... instruction signals embedded in the "Wall</p>
Page 265 line 27 to Page 266 line 21.			
Page 59 lines 29-33.			
Page 25 line 34 to page 26 line 1.			
Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3- 6, and page 90 lines 4- 11.			
Page 21 lines 23-24.			
Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.		
Column 19 lines 43-44.	...instruction signals embedded in the		

<p>a predetermined time.</p>	<p>Column 11 lines 25-28.</p>	<p>Such input information might also indicate when and where the cable head end facility should expect to receive the programming.</p>	<p>Page 326 lines 33-35.</p>	<p>6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ... After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p>
<p>Dependent Claim 143. The method of claim 141, wherein said one of said first of said data receiver stations and said second of said data receiver stations is programmed to process said at least one control signal</p>	<p>Column 19 lines 8-9.</p>	<p>Microcomputer, 205, is preinformed of the time of cablecasting.</p>	<p>Page 437 lines 1-3.</p>	<p>Such input information can indicate when and how the station should expect to receive each program unit,.... Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p>
<p>one of said first of said data receiver stations and said second of said data receiver stations is programmed to process said at least one control signal</p>	<p>Column 17 lines 47-53.</p>	<p>FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.</p>	<p>Page 390 lines 30-35.</p>	<p>Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.</p>
<p>programmed to process said at least one control signal</p>	<p>Column 11 lines 21-24.</p>	<p>Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code ...</p>	<p>Page 396 lines 8-10. Page 326 lines 30-33.</p>	<p>Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples. Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information.</p>

Appendix A

	Column 19 lines 42-43.	Microcomputer, 205, is preprogramed to respond in a predetermined fashion to...	Page 450 lines 31-32.	...caused his microcomputer, 205, to be preprogrammed as described above;...
	Column 9 lines 47-52.	The controller, 20, is programed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.	Page 21 lines 20-23. Page 248 line 17 to page 249 line 5.	Microcomputer, 205, is preprogrammed to ... respond ... to ... Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.
			Page 257 line 24 to page 258 line 19.	Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ... Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.
based on a location in said information	Column 11 lines 38-39.	By comparing identification signals on the incoming programming...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned

Appendix A		
transmission.		dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
Dependent Claim 144. The method of claim 143, further comprising the step of embedding said at least one control signal in said information		SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available,.... Meter-monitor segments contain meter information and/or monitor information. ... instruction signals embedded in the "Wall Street Week" programming transmission.
	Page 84 lines 26-28.	
	Page 28 lines 26-27.	
	Page 49 lines 26-27.	
	Page 21 lines 23-24.	
	... instruction signals embedded in the "Wall Street Week" programming transmission.	
	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	
	Column 19 lines 43-44.	
	Column 19 lines 60-63.	
	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995
References	Language	Language

Appendix A

	pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both.		from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both.
Dependent Claim 145. The method of claim 143, wherein said signal is transmitted from said at least one origination station	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
			At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
			The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	The present invention employs signals embedded in programming.
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming...	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72; computer, 73, determines what specific program unit has

Claim Language	Support to Applicants: U.S. Pat. No. 4,690,490, filed November 3, 1981	Support to instant specification filed June 6, 1995
References	Language	Language

Appendix A

		<p>been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
		<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p>
		<p>... monitor information that identifies what programming is available,...</p>
		<p>Meter-monitor segments contain meter information and/or monitor information.</p>
		<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p>
		<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p>
		<p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p>
		<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the</p>
		<p>Page 84 lines 26-28.</p>
		<p>Page 28 lines 26-27.</p>
		<p>Page 49 lines 26-27.</p>
		<p>Page 21 lines 23-24.</p>
		<p>Page 451 lines 6-7.</p>
		<p>Page 23 line 35 to page 24 line 4.</p>
		<p>Page 37 line 26 to page 38 line 8.</p>
		<p>...instruction signals embedded in the "Wall Street Week" programming transmission.</p>
		<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...</p>
		<p>Column 19 lines 43-44.</p>
		<p>Column 19 lines 45-49.</p>
before		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490, filed November 3, 1981.	References	Support to instant specification filed June 6, 1995.	Language
Appendix A				
a portion of said information transmission is transmitted.	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	<p>relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...</p> <p>During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.</p>	<p>Page 24 lines 5-6.</p> <p>Page 451 lines 7-9.</p> <p>Page 25 lines 26-33.</p>
Dependent Claim 146.				
The method of claim 13, further comprising the step of:				
including in one of said data and said at least one control signal a first portion of information which	Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion...	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.	<p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs</p> <p>Page 30 lines 7-9.</p> <p>Page 36 line 32 to page 37 line 3.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995	Appendix A
Reference	Reference	Reference	Language
enables one of said data receiver stations to	Column 7 lines 37-39.	... that enables buffer/comparator, 8, among other things, to assemble signal units from signal words.	<p>Page 37 lines 22 to page 38 line 10.</p> <p>Controller, 39, 44, or 47, is preprogrammed to receive units of signal information, to assemble said units into signal words that subscriber station apparatus can receive and process, and to transfer said words to said apparatus. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular predetermined fashion or fashions; to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. Said controller, 39, 44, or 47, has one or more output ports for communicating signal information to said apparatus.</p> <p>Fig. 3A shows one such preferred controller, 39.</p> <p>Buffer, 39C, and processor, 39D, are the second buffer and processor and perform protocol conversion functions.</p> <p>In all cases, signals may convey information in discrete words, transmitted at separate</p>
		Page 156 line 33.	
		Page 157 lines 5-7.	
		Page 14 lines 22-25.	

Appendix A

select one of a second portion of information and	Column 7 lines 54-58.	If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 31 lines 14-18.	If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.	times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction.
a device to which to communicate a second portion of information.	Column 7 lines 54-58.	If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 31 lines 14-18.	If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.	
Dependent Claim w					
The method of claim 146, further comprising the steps of:					
communicating said second portion of information to a storage device; and	Column 11 lines 3-14.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, along with information identifying the channel source of each signal, externally to code reader, 72. ... Code reader, 72, passes the received signals, with channel identifiers, to cable program controller and computer, 73.	Page 325 line 34 to page 326 line 11.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station, automatically adds, in a predetermined fashion source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information,	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to Instant Specification filed June 6, 1995
References	Language	Language

Appendix A		
		to code reader, 72.
storing said second portion of information.		Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73.
	Column 11 lines 38-39.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
		SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
		... monitor information that identifies what programming is available, ...
		Meter-monitor segments contain meter information and/or monitor information.
Dependent Claim 148.		
The method of	Column 11 lines 12-14.	Code reader, 72, buffers and passes the
		Code reader, 72, buffers and passes the

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. Language	Support to instant specification filed June 6, 1995. Language	Appendix A
claim 147, wherein said device to which to communicate said second portion of information comprises a computer and said	Column 19 lines 63-64. signals, with channel identifiers, to cable program controller and computer, 73. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2. Page 37 line 26 to page 38 line 8.	received SPAM message information, with source mark information, to cable program controller and computer, 73. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
second portion of information includes a first instruction to be communicated to said computer, said method further comprising the step of including said second portion of information in said at least one control signal.	Column 11 lines 3-5. Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...	Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;...
Column 11 lines 38-39.	By comparing identification signals on the incoming programming...	Page 59 lines 29-33. Page 327 line 35 to page 328 line 13.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system,

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

			<p>71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
		Page 84 lines 26-28.	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p>
		Page 28 lines 26-27.	<p>... monitor information that identifies what programming is available,....</p>
		Page 49 lines 26-27.	<p>Meter-monitor segments contain meter information and/or monitor information.</p>
		Page 25 line 33 to page 26 line 2..	<p>Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203, transferred to microcomputer, 205; and executed ...</p>
	Column 19 lines 60-66.	Page 37 line 26 to page 38 line 8.	<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39,</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
Appendix A		
		... monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen Company) that collect statistics on viewership and programming usage.
TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...	Page 88 lines 19-22.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above escribed fashion.
	Page 408 lines 18-29.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44.
	Page 414 lines 13-27.	The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...
The processors, 204 and 210, transfer this information to signal processor, 200, ...	Page 15 lines 16-22.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.
	Page 36 lines 32-33.	Controller, 39, 44, or 47, has capacity for
	Page 38 lines 11-14.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A		
		identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.
		... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.
		Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.
		In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in ...
		The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to
	Page 411 lines 10-15.	
	Page 418 line 23 to page 419 line 15.	
... for recording and subsequent transmission to a remote data collection site.	Page 411 line 28 to page 412 line 2.	
	Page 173 line 30 to page 174 line 23 from example #3.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

		<p>buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3).")</p>
	Page 419 lines 4-15.	<p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p>
Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.	Page 28 lines 25-35.	<p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p>
	Page 397 lines 17-20.	<p>Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995
Reference	Language	Language

information evidencing one of (i) receipt of a portion of said information transmission and	Column 11 lines 8-10.	Signal processor, 71, also has means to record said signals and transfer them to external communications network, 97.	Page 326 lines 11-15.	Signal processor system, 71, also has signal processor means to control signal processor system, 71, to record meter-monitor information of said message information, and to transfer recorded information to external communications network, 97.
	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
	Column 18 lines 38-41.	Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.	Page 28 lines 25-35.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
			Page 397 lines 17-20.	Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Language	References	Support to instant specification filed June 6, 1995	Language	Appendix A
(ii) a function performed in response to a portion of said information transmission, said method further comprising the step of including said signal content in one of said data and said at least one control signal.	Column 12 lines 54-56. Column 12 lines 45-53.	Signal processors, 71 and 96, can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively. Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs.	Page 337 lines 19-21. Page 337 lines 1-19.	And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively. Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.	
	Column 18 lines 30-37.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned,	Page 408 lines 18-29			

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490, filed November 3, 1981	Support to Instant Specification filed June 6, 1995
References	Language	Language

Appendix A		
		<p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ...</p> <p>Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the</p>
		<p>Page 414 lines 13-27</p>
		<p>Page 15 lines 16-22</p>
	The processors, 204 and 210, transfer this information to signal processor, 200, ...	<p>Page 36 lines 32-33.</p>
		<p>Page 38 lines 11-14.</p>
		<p>Page 411 lines 10-15</p>
		<p>Page 418 line 23 to page 419 line 15.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490, filed November 3, 1981	Support to instant specification filed June 6, 1995	Appendix A
Reference	Language	Reference	Language

	... for recording and subsequent transmission to a remote data collection site.	Page 411 line 28 to page 412 line 2.	SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.
		Page 173 line 30 to page 174 line 23 from example #3.	In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in
		Page 419 lines 4-15.	The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1 st monitor information (#3).")
			In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995
References	Language	Language

Appendix A		
	Page 28 lines 25-35.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
	Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions
	Page 28 lines 26-27.	... monitor information that identifies what programming is available,

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995
References	Language	Language

Appendix A

	Column 19 lines 14-15.	...pass all program and channel identifiers on all programing being cablecast on the multi-channel system.	<p>Page 49 lines 26-27.</p> <p>Page 435 lines 16-18.</p> <p>Page 248 lines 22-26 from example #5.</p> <p>Page 250 lines 13-16 from example #5.</p> <p>Page 252 lines 15-35 from example #5.</p>	<p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C....</p> <p>Via a conventional multi-channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...</p> <p>Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter-monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment)</p> <p>then meter-monitor segment information that includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first</p>
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Appendix A		
		command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...
	Page 267 lines 20-28 from example #5.	<p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p>
	Page 59 lines 29-33.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission
	Column 19 lines 60-63.	
	Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
	Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
Dependent		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to Instant Specification filed June 6, 1995.
Reference	Reference	Reference
Language	Language	Language

Appendix A

Claim 150. The method of claim 149, wherein said first portion of information controls said one of said data receiver stations and	Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion...	Page 30 lines 7-9.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion. Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs
	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1993
References	Language	Language

said signal content is communicated to said remote station, said method further comprising one step from the group consisting of:	Column 18 lines 22-25.	Monitor or processor, 204, also identifies signals addressed to tuner, 213, which it transfers accordingly. These signals instruct tuner, 213, to tune radio, 209, to the proper frequency for the simulcast.	Page 408 lines 31-34.	information and/or monitor information. Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209. Receiving said SPAM message causes said controller, 44, ... to ... tune radio, 209, to the frequency, ...
	Column 11 lines 8-10.	Signal processor, 71, also has means to record said signals and transfer them to external communications network, 97.	Page 326 lines 11-15.	Signal processor system, 71, also has signal processor means to control signal processor system, 71, to record meter-monitor information of said message information, and to transfer recorded information to external communications network, 97.
	Column 12 lines 54-56.	Signal processors, 71 and 96, can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively.	Page 337 lines 19-21.	And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.
	Column 18 lines 29-41.	FIG. 6B also shows signal processor, 200, monitoring for a data gathering and ratings service.	Page 411 lines 10-11.	In addition, because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, ...
			Page 88 lines 19-22.	... monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen Company) that collect statistics on viewership and programming usage.
		TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...	Page 408 lines 18-29.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995	Appendix A
References	Language	Language	Language
		<p>... for recording and subsequent transmission to a remote data collection site.</p>	<p>page 419 line 15:</p> <p>programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p>
		<p>Page 411 line 28 to page 412 line 2.</p>	<p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in ...</p>
		<p>Page 173 line 30 to page 174 line 23 from example #3.</p>	<p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1" monitor information (#3).")</p>
		<p>Page 419 lines 4-15.</p>	<p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to</p>

Appendix A

		<p>Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.</p>	<p>Page 28 lines 25-35.</p>	<p>initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...</p>
including an identifier in said signal content;	Column 15 lines 57-62.	<p>The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.</p>	<p>Page 315 lines 20-24.</p>	<p>Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.</p> <p>Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.</p>
			<p>Page 44 lines 26-32.</p>	
			<p>Page 49 line 26 to</p>	<p>Meter-monitor segments contain meter</p>

Claim Language	References	Language	References	Language
Support to Applicants' U.S. Pat. No. 4,890,490, filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A	information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ... Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available,.... Meter-monitor segments contain meter information and/or monitor information.	information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ... Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available,.... Meter-monitor segments contain meter information and/or monitor information.
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 50 line 4. Page 327 line 35 to page 328 line 13.	
			Page 84 lines 26-28.	
			Page 28 lines 26-27. Page 49 lines 26-27.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant Specification filed June 6, 1995.	References	Language
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Appendix A

Column 19 lines 20-23.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 267 lines 20-28 from example #5.	<p>All eight of said messages are commands. The 1st- and 3rd-new-radio-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205,</p>
		Page 435 lines 16-25.	
		Page 436 line 9 to page 437 line 3.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 Filed November 3, 1981	References	Language	Support to Instant Specification Filed June 6, 1993	References	Language
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				Appendix A	
				contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.	
				... to receive the transmission of cable channel 13;...	Page 439 lines 14-15.
including said signal content in said first portion of information; and	Column 15 lines 57-62.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.		Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned. Commands often contain meter-monitor segments. Said segments contain meter information, and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below. Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and	Page 315 lines 20-24. Page 44 lines 26-32. Page 49 line 26 to Page 50 line 4.

Language	References	Language	References	Language
	Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion...	Page 30 lines 7-9. Page 36 line 32 to page 37 line 3.	suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ... Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion. Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs ...
including said first portion of information in said at least one control signal.	Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion...	Page 30 lines 7-9.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.
	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...	Page 36 line 32 to page 37 line 3. Page 325 line 34 to page 326 line 7.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs ... At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....
			Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates

Claim Language	References	Language	References	Language	References
Support to Applicants' U.S. Pat. No. 4,680,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A			
	Column 17 lines 39-41.	Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming transmissions,...	Page 15 lines 16-23.	said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. The frequencies may convey television, radio, or other programming transmissions.... The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information;	
Dependent Claim 151.					
The method of claim 146, wherein said one of said data receiver stations includes a computer and	Column 11 lines 15-17. Column 19 lines 42-43.	Cable program controller and computer, 73, is the central automatic control unit for the transmission facility. Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to...	Page 326 lines 19-20. Page 450 lines 31-32. Page 21 lines 20-23. Page 326 line 30 to page 327 line 2.	Cable program controller and computer, 73, is the central automatic control unit for the transmission station. ...caused his microcomputer, 205, to be preprogrammed as described above;.... Microcomputer, 205, is preprogrammed to ... respond ... to ... Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information. Such input information can indicate when and how the station should expect to receive each program unit.... Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...	
a plurality of first instructions program said computer to	Column 11 lines 21-31.	Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code (which in the case of advertising might be a purchase order number). Such input information might also indicate when and where the cable head end facility should expect to receive the programming. Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.			

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981	References	Support to instant specification filed June 6, 1995	Language
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Appendix A

Column 19 lines 45-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 451 lines 6-7. Page 23 line 35 to page 24 line 4. Page 37 line 26 to page 38 line 8.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ... Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	These signals instruct microcomputer, 205, ...	Page 24 lines 5-16.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."
	... to generate several graphic video overlays, ...	Page 451 lines 7-11.	...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not

Claim Language	References	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981, Language	References	Support to instant specification filed June 6, 1995, Language
		<p>... which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to ...</p> <p>... transmit these overlays to TV set, 202, ...</p> <p>... upon command.</p>	<p>Page 19 line 29 to page 20 line 20.</p> <p>Page 26 lines 4-8.</p> <p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>	<p>Appendix A</p> <p>one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a</p>

Appendix A

respond to one of a command and a second instruction, said method further comprising one of the group consisting of:	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	particular combining.) Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words

Appendix A					
which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")					
A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a					
(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)					
... with information of the programming schedule, received earlier from input, 74, and/or network, 98, ...					
... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.					

Claim Language	References	Language	References	Language	References	Language	References	Language
	<p>Column 19 lines 62-63</p> <p>Column 19 lines 43-53.</p>	<p>... and is transmitted in the programming transmission.</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>... several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.</p> <p>These signals instruct microcomputer, 205, ...</p>	<p>Page 25 line 35 to page 26 line 1.</p> <p>Page 21 lines 23-24.</p> <p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-16.</p>	<p>... embedded in the programming transmission, and transmitted.</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a</p>				

Appendix A

Claim Language	References	Language	References	Language
Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.			Support to instant specification filed June 6, 1995.	

Appendix A

				initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
transmitting one of a command and a second instruction.	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
			Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
			Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information

Claim Language	Support to Applicants U.S. Pat. No. 4,680,490 filed November 3, 1981	Support to instant specification filed June 6, 1995
References	Language	Language

			with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
		Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate television stations and embedded in transmissions....
		Page 28 lines 26-27.	... monitor information that identifies what programming is available,....
		Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
Column 19 line 60 to column 20 line 1.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 25 line 34 to page 26 line 2.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;
		Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receive, detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ...

Appendix A

Support to Applicant's U.S. Pat. No. 4,690,490 filed November 3, 1981	Support to instant specification filed June 6, 1995
Language	Language
References	References

Appendix A

		<p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p>	<p>Page 26 lines 4-11.</p>	<p>to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p>
Dependent Claim 152.				
<p>The method of claim 13, wherein said at least one control signal is for controlling said first of said data receiver stations to transmit said data to said second of said data receiver stations to</p>	<p>Column 11 lines 38-43.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in</p>

Claim Language	References	Language	References	Language
			<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>...caused his microcomputer, 205, to be preprogrammed as described above; ...</p> <p>Microcomputer, 205, is preprogrammed to ... respond ... to instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions</p>
control said second of said data receiver stations.	Column 11 lines 50-57.	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87.</p> <p>controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 450 lines 31-32.</p> <p>Page 21 lines 20-24.</p> <p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to</p>	<p>Appendix A</p>

Claim Language	References	U.S. Pat. No. 4,690,490 filed November 3, 1981	Language	Support to instant specification filed June 6, 1995	Language
		by decoder, 203, and transferred to microcomputer, 205.		page 24 line 4. Page 37 line 26 to page 38 line 8.	<p>is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Language	References
	References	Language	Appendix A
Dependent Claim 153. The method of claim 18, wherein said at least one control signal is for controlling said first of said programming receiver stations to compare said mass medium programming to a programming schedule and to	Column 11 lines 32-39. By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75. By comparing identification signals on the incoming programming with the programming schedule ...	Page 327 line 35 to page 328 line 13. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has
transmit said mass medium programming according to said programming schedule.	Column 11 lines 38-43.	Page 84 lines 26-28. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Language	Language	Language
	<p>programming.</p> <p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87.</p> <p>controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to</p>
		<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Language	Language	Language
Appendix A		
Dependent Claim 154. The method of claim 18, wherein said at least one control signal is for controlling transmission of said mass medium programming according to a programming schedule and	 Column 4 lines 5-9. Column 11 lines 38-43. Column 11 lines 50-57.	 matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ...

Claim Language	References	Language	References	Support to instant specification filed June 6, 1995.
		from TV receiver, 53, to the output that leads to modulator, 87.	Page 49 lines 26-27. Page 328 line 22 to page 329 line 1.	<p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
logging of transmission of said mass medium programming.	Column 12 lines 45-53.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs.	Page 337 lines 1-19.	<p>Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program</p>

Appendix A

Claim Language	References	Language	References	Language
				Support to instant specification filed June 6, 1995.
				Appendix A
Dependent Claim 155.				unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.
The method of claim 18, wherein said signal is for controlling transmission of said mass medium programming according to a programming schedule and	Column 4 lines 5-9. Column 11 lines 38-43.	These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. ... By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 13 lines 25-28. Page 327 line 35 to page 328 line 13.	The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in

Claim Language	References	Language	References	Support to instant specification filed June 6, 1995. Language
	<p>Column 11 lines 50-57.</p>	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87.</p> <p>controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local apparatus receives programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing</p>
<p>generation of statistics pertaining to said mass medium programming.</p>	<p>Column 15 lines 27-30.</p>	<p>FIG 5 illustrates methods for monitoring reception and operation which methods can be used to gather statistics on programming usage and associated uses of other data transmissions and equipment.</p>	<p>Page 312 line 33 to page 313 line 8.</p>	

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	References	Language
		<p>Page 28 lines 25-29.</p> <p>Page 411 lines 10-11.</p> <p>Page 88 lines 19-22.</p> <p>Page 408 lines 18-29.</p> <p>Page 414 lines 13-27.</p> <p>Page 15 lines 16-22.</p>	<p>[Signal processor 200 in Fig. 7 and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage.</p> <p>In addition, because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, ...</p> <p>... monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen Company) that collect statistics on viewership and programming usage.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ...</p> <p>Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ...</p> <p>Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The</p>

Claim Language	References	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Support to instant specification filed June 6, 1995.
Claim Language	References	Language	Language	Language
				<p>input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause</p>
	<p>The processors, 204 and 210, transfer this information to signal processor, 200, ...</p>		<p>Page 36 lines 32-33.</p> <p>Page 38 lines 11-14.</p> <p>Page 411 lines 10-15.</p> <p>Page 418 line 23 to page 419 line 15.</p>	
	<p>... for recording and subsequent transmission to a remote data collection site.</p>		<p>Page 411 line 28 to page 412 line 2.</p>	

Claim Language	References	Language	References	Support to instant specification filed June 6, 1995. Language
		<p>Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.</p>	<p>Page 173 line 30 to page 174 line 23 from example #3.</p>	<p>Appendix A</p> <p>a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in ...</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st" monitor information (#3).")</p> <p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
				so-called "ratings" stations that collect statistical data on programming availability and usage. Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...
Dependent Claim 156.			Page 397 lines 17-20.	
The method of claim 18, wherein said at least one control signal is for controlling transmission of said mass medium programming according to a programming schedule and identification of content of said mass medium programming.	Column 4 lines 5-9. Column 11 lines 38-43.	These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing, ... By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 13 lines 25-28. Page 327 line 35 to page 328 line 13.	The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate

Claim Language	References	U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language	Language
References	Language	Language	References	Language	Appendix A
			<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>	
<p>Column 11 lines 50-57.</p>	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>		<p>Page 315 lines 20-24.</p>	<p>Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.</p>	<p>transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
<p>Column 15 lines 57-62.</p>	<p>The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.</p>		<p>Page 44 lines 26-32.</p>	<p>Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
			<p>the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.</p> <p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <ul style="list-style-type: none"> ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ... 	
Dependent Claim 157.			<p>Page 49 line 26 to Page 50 line 4.</p>	
<p>The method of claim 18, wherein said at least one control signal is for controlling transmission of said mass medium programming according to a programming schedule and</p>				
	<p>Column 4 lines 5-9.</p> <p>Column 11 lines 38-43.</p>	<p>These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing, ...</p> <p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 13 lines 25-28.</p> <p>Page 327 line 35 to page 328 line 13.</p>	<p>The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
output of an identifier	Column 11 lines 50-57.	...if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p> <p>Page 337 lines 1-21.</p>	<p>information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>	<p>Appendix A</p> <p>Fig. 6 shows particular signal processor</p>

Claim Language	References	Language	References	Support to instant specification filed June 6, 1995. Language
of said mass medium programming to a remote data collection station.		multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs. Signal processors, 71 and 96, can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively.		<p>Appendix A</p> <p>system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs. And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.</p>
<p>Dependent Claim 158.</p> <p>The method of claim 18, wherein said at least one control signal is for controlling identification of content of said mass medium programming and for</p>	Column 11 lines 32-39.	<p>By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75.</p> <p>By comparing identification signals on the incoming programming with the programming schedule ...</p>	Page 327 line 35 to page 328 line 13.	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
		Language
		Appendix A
		information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
		SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
		... monitor information that identifies what programming is available, ...
		Meter-monitor segments contain meter information and/or monitor information.
		Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.
		By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
		SPAM signals are generated at original

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
Dependent Claim 159.			Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
	The method of claim 18, wherein said at least one control signal is for controlling identification of content of said mass medium programming and	Column 11 lines 32-39.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62,

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. References	Support to instant specification filed June 6, 1995. Language	Support to instant specification filed June 6, 1995. References	Language
		the incoming programming with the programming schedule ...	<p>Page 84 lines 26-28.</p>	<p>Appendix A</p> <p>and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>
delay of transmission of said content.	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
		Appendix A
		received program unit.
	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 329 line 2-22.</p>
<p>Column 11 lines 57-65.</p>	<p>Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	
References	References	References	Language
<p>Dependent Claim 160.</p> <p>The method of claim 18, wherein said at least one control signal is for controlling selection of a storage location and</p>	<p>Column 11 lines 38-43.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the</p>
	<p>Column 11 lines 57-61.</p>	<p>Page 327 line 35 to page 328 line 13.</p> <p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 329 line 2-15.</p>	<p>Appendix A</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

storage of a portion of said mass medium programming at said selected storage location.	Column 11 lines 57-65. Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 329 line 2-22. added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; ... Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.
Dependent		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
Claim 161.		Appendix A
The method of claim 18, wherein said at least one control signal is for	Column 11 lines 38-43.	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
controlling delay of transmission of said mass medium programming.	Column 11 lines 57-65.	<p>Page 327 line 35 to page 328 line 13.</p> <p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 329 line 2-22.</p>
	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p> <p>Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and</p>	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	References	References
Language	Language	Language
controlling said second of said programming receiver stations to receive said mass medium programming.	Column 19 lines 20-25.	<p>news-items-of-interest information...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) By contrast, the...</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CCI3-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is</p>
Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...	Page 267 lines 20-28 from example #5.	<p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>

Claim Language	References	Language	References	Language
				Appendix A
				<p>preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13; ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Language	Language	Language
Dependent Claim 163.	Appendix A	receive the transmission of cable channel 13; ...
The method of claim 18, wherein said signal is for controlling transmission of said mass medium programming according to a transmission schedule and for	Column 11 lines 38-43.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.
	Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations or embedded in television or radio or other programming transmissions....
	... monitor information that identifies what programming is available, ...	Meter-monitor segments contain meter information and/or monitor information.
Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
controlling said second of said programming receiver stations to store said mass medium programming.	<p>controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p> <p>Column 18 lines 56-58.</p> <p>Column 19 lines 20-27.</p>	<p>Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>The signal processor, 200, of said station is preprogrammed ... with particular news-items-of-interest information that includes identification information of the particular stocks in said portfolio....</p> <p>One company whose stock is preprogrammed at said microprocessor, 205, is the American Telephone and Telegraph Company whose stock is identified by particular binary information of "T". And among the news-items-of-interest information at said RAM is an instance of said binary information of "T".</p> <p>...said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information....</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205.</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Language	Language	Language
	<p>predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...</p>	<p>Appendix A</p> <p>Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</p>
		<p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>

Claim Language	References	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Support to instant specification filed June 6, 1995.
Language	Language	Language	Language	Language
				<p>Appendix A</p> <p>Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13, ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>... to cause selected apparatus of said station-cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert ...</p> <p>... to cause selected apparatus of said station-cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, ...</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
				Page 446 lines 18-23.	... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
Dependent Claim 164.					
The method of claim 18, wherein said at least one control signal is for controlling said network to transmit said mass medium programming at a specific time and to	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
	Page 84 lines 26-28.				SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
	Page 28 lines 26-27.				... monitor information that identifies what programming is available, ...
	Page 49 lines 26-27.				Meter-monitor segments contain meter information and/or monitor information.
	Column 11 lines 50-57.	... if controller/computer, 73, determines	Page 328 line 22 to		For example, computer, 73, receives a given

Appendix A

Claim Language	References	Language	References	Support to instant specification filed June 6, 1995. Language
		<p>that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>page 329 line 1.</p>	<p>Appendix A</p> <p>SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
<p>generate and output information.</p>	<p>Column 19 line 60 to column 20 line 1.</p>	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p>	<p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ...</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
References	References	References
		Appendix A
Dependent Claim 165.		
The method of claim 18, wherein said at least one control signal is for controlling said network to generate information to	Column 19 line 60 to column 20 line 1.	<p>to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	References	Language
<p>complete said mass medium programming and to output said generated information with said mass medium programming.</p> <p>Dependent Claim 166.</p> <p>The method of claim 18, wherein at least one control signal is for controlling said network to transmit said mass medium programming according to a programming schedule and</p>	<p>Column 19 lines 59-60.</p>	<p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p> <p>Then the host says, "And here is what your portfolio did."</p>	<p>fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p> <p>Then the host says, "And here is what your portfolio did."</p>
<p>The method of claim 18, wherein at least one control signal is for controlling said network to transmit said mass medium programming according to a programming schedule and</p>	<p>Column 11 lines 38-43.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 26 lines 4-11.</p> <p>Page 25 lines 33-34.</p> <p>Page 327 line 35 to page 328 line 13.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	
References	References	References	Language
transmission.	column 20 line 1.	<p>generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p> <p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p>	<p>Appendix A</p> <p>at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p>
Dependent Claim 167.			
The method of claim 18, wherein said	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming	Computer, 73, monitors incoming programming by means of the aforementioned

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. References	Language	Support to instant specification filed June 6, 1995. References	Language
at least one control signal is for controlling transmission of said mass medium programming according to a programming schedule and	<p>Column 11 lines 50-57.</p>	<p>schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p> <p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>Appendix A</p> <p>dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
output of said mass medium programming at said second of said programming receiver stations.	Column 19 lines 20-25. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...	modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) By contrast, the ... In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ... Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station. Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW
		Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
		<p>information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13; ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p>
	<p>Page 439 lines 14-15.</p> <p>Page 437 lines 1-6.</p> <p>Page 439 lines 9-15.</p>	<p>Appendix A</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A				
			Page 295 lines 6-8.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...
			Page 439 lines 9-15.	...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
Dependent Claim 168.				
The method of claim 18, wherein said at least one control signal is for controlling decryption of a portion of said mass medium programming.	Column 20 lines 37-42.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200, ...	Page 477 lines 8-23.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...
			Page 281 lines 1-6.	By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called " covert control .")
		... which, in a predetermined fashion, signal processor, 200, decrypts and transfers...	Page 282 line 2 to page 283 line 33.	... the information of said segments is encrypted prior to transmission ... The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. References	Support to instant specification filed June 6, 1995. Language	Support to instant specification filed June 6, 1995. References	Support to instant specification filed June 6, 1995. Language
				<p>controlled functions that are invoked by the unencrypted execution segment of said message. ...</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p>
<p>Dependent Claim 169.</p> <p>The method of claim 18, wherein said at least one control signal is for controlling transmission of said mass medium programming according to a schedule and</p>	<p>Column 11 lines 38-43.</p>	<p>... to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.</p>	<p>Page 478 lines 1-5.</p>	
	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>		<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
				References	Appendix A
		<p>Column 11 lines 50-57.</p> <p>... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) By contrast, the ...</p>	
<p>output of said mass medium programming as a portion of a multimedia presentation.</p>	<p>Column 19 lines 20-29.</p>	<p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 267 lines 20-28 from example #5.</p>		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
				Appendix A	
				Page 435 lines 16-25.	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p>
				Page 436 line 9 to page 437 line 3.	<p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said</p> <p>please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said</p> <p>program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
			Appendix A	
	Then, in a predetermined fashion, microcomputer, 205, may		Page 437 lines 1-6.	-on-CC13-at-particular- 8:30 information to the controller, 20. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatusto cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
	... instruct tuner, 214, to switch box, 201, to channel X ...		Page 439 lines 9-15.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...
	... and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...		Page 295 lines 6-8.	...instructions causes controller, 20, ...; to switch power on to video recorder/player, 217, ...
	... and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on ...		Page 445 lines 24-27.	...controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
	... and tuner, 215, to tune appropriately to "Wall Street Week."		Page 446 lines 18-23.	...instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...
			Page 445 line 24 to page 446 line 1.	...and to tune monitor, 202M, in a predetermined fashion.
			Page 445 line 35 to page 446 line 1.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
	References	Appendix A
	<p>Column 19 line 53-56.</p>	<p>Page 446 lines 17-21.</p>
	<p>Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.</p>	<p>During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.</p>
	<p>Column 19 lines 67 to column 20 line 2.</p>	<p>Page 451 line 3. Page 26 lines 8-11.</p>
	<p>The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p>	<p>And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p>
<p>Dependent Claim 170. The method of claim 18, wherein said first of said programming receiver stations and</p>	<p>Column 11 lines 38-39.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

<p>said second of said programming receiver stations each identify content of said mass medium programming said at least one control signal,</p> <p>said method further comprising the step of including an identifier in said at least one control signal.</p>	<p>Column 19 lines 20-23.</p>	<p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25.</p>	<p>information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the</p>
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Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
	References	Language	References	Language	Appendix A
	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them,	Page 436 line 9 to page 437 line 3.	microcomputer, 205, of said station. Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information. Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20. ...to receive the transmission of cable channel 13;... At signal processor system, 71, which is a system as shown in Fig: 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted	Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
	<p>...</p> <p>Column 19 lines 17-20.</p> <p>... processor or monitor, 12, ... reacts, ... by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.</p>	<p>Appendix A</p> <p>into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station; automatically adds, in a predetermined fashion, source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, ...</p> <p>... microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance</p>
		<p>Page 288 lines 16-20.</p> <p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25 from example #5.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming...		<p>of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>	Appendix A
			Page 327 line 35 to page 328 line 13.	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>...monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus</p>	
			Page 84 lines 26-28.		
			Page 28 lines 26-27.		
			Page 49 lines 26-27.		
	Column 7 lines 54-58.	If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external	Page 31 lines 14-18.		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
		equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.		to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.
Dependent Claim 171.				
The method of claim 170, wherein said identifier identifies one of television and radio programming, said method further comprising the step of	Column 11 lines 38-39.	By comparing identification signals on the incoming programming...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available,....
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
	Column 12 lines 57-61.	This particular embodiment describes a transmission facility transmitting only television programming. The facility could	Page 339 lines 9-26.	So far this disclosure has described an intermediate transmission station that transmits conventional television

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
References	References	References
Appendix A	Language	Language
<p>including said one of television and radio programming in said mass medium programming.</p>	<p>also process and transmit radio programming and other electronic data according to the methods described here ...</p> <p>Column 10 lines 61-64.</p> <p>Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.</p> <p>Column 12 lines 57-61.</p> <p>This particular embodiment describes a transmission facility transmitting only television programming. The facility could also process and transmit radio programming and other electronic data according to the methods described here ...</p>	<p>programming; however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...</p> <p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...</p> <p>Page 324 lines 23-33.</p> <p>Page 339 lines 9-26.</p> <p>So far this disclosure has described an intermediate transmission station that transmits conventional television programming; however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...</p>
Dependent		

Claim Language	References	Language	References	Language
Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. Support to instant specification filed June 6, 1995.				
Claim 172.				Appendix A
The method of claim 170, wherein said identifier identifies one of video and audio, said method further comprising the step of	Column 11 lines 38-39.	By comparing identification signals on the incoming programming...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available,.... Meter-monitor segments contain meter information and/or monitor information. So far this disclosure has described an intermediate transmission station that transmits conventional television programming.... The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53,
	Column 12 lines 57-58.	This particular embodiment describes a transmission facility transmitting only television programming.	Page 28 lines 26-27. Page 49 lines 26-27. Page 339 lines 9-11.	
including said one of video and audio in said mass medium programming.	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional	Page 324 lines 23-33.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. References	Language	References	Support to instant specification filed June 6, 1995. Language
	paths described above.			<p>Appendix A</p> <p>54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...</p> <p>So far this disclosure has described an intermediate transmission station that transmits conventional television programming....</p>
<p>Dependent Claim 173.</p> <p>The method of claim 170, wherein said identifier identifies one of a datum and an instruction, said method further comprising the step of</p>	<p>Column 12 lines 57-58.</p> <p>This particular embodiment describes a transmission facility transmitting only television programming.</p>	<p>Page 339 lines 9-11.</p>		
	<p>Column 11 lines 38-39.</p> <p>By comparing identification signals on the incoming programming...</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Page 84 lines 26-28.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

			television or radio or other programming transmissions....
		Page 28 lines 26-27.	... monitor information that identifies what programming is available,....
		Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
	Column 7 lines 54-58.	Page 31 lines 14-18.	If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.
	Column 17 line 44.	Page 95 lines 18-21.	Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to ... and to transfer said message to ...
including said one of a datum and an instruction in said mass medium programming.	Column 19 lines 60-65.	Page 25 line 33 to page 26 line 2.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...
		Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Language	References	Language	Support to instant specification filed June 6, 1995.
	References	Language	References	Language	
Dependent Claim 174: The method of claim 18, wherein said first of said programming receiver stations and said second of said programming receiver stations each monitor one of availability, use, and usage of content of said mass medium programming, said method further comprising the step of	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...	Page 26 line 4.	art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	Appendix A
	Column 11 lines 6-7.	...pass them, along with information identifying the channel source of each signal, externally to code reader, 72.	Page 325 line 34 to page 326 line 7.	Said signal instructs microcomputer, 205, ...	
	Column 11 lines 8-10.	Signal processor, 71, also has means to record said signals and transfer them to external communications network, 97.	Page 326 lines 7-11.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....	
	Column 12 lines 45-56.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93. Such	Page 326 lines 11-13.	...adds, ... source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.	
			Page 337 lines 1-21.	Signal processor system, 71, also has signal processor means to control signal processor system, 71,...	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
Appendix A		
	records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs. Signal processors, 71 and 96, can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively.	processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs. And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.
Column 18 lines 29-41.	FIG. 6B also shows signal processor, 200, monitoring for a data gathering and ratings service.	In addition, because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, ...
		... monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen Company) that collect statistics on viewership and programming usage.
	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.
		Page 411 lines 10-11. Page 88 lines 19-22. Page 408 lines 18-29.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language
			Appendix A
		Page 414 lines 13-27.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44.
		Page 15 lines 16-22.	The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...
	The processors, 204 and 210, transfer this information to signal processor, 200, ...	Page 36 lines 32-33.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.
		Page 38 lines 11-14.	Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.
		Page 411 lines 10-15.	... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.
		Page 418 line 23 to page 419 line 15.	Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the

Claim Language	References	Language	References	Language
		<p>... for recording and subsequent transmission to a remote data collection site.</p>	<p>Page 411 line 28 to page 412 line 2.</p>	<p>Appendix A</p> <p>SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in ...</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3).")</p> <p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
	<p>Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.</p> <p>FIG 5 illustrates methods for monitoring reception and operation which methods can be used to gather statistics on programming usage and associated uses of other data transmissions and equipment.</p>	<p>Page 28 lines 25-35.</p> <p>Page 397 lines 17-20.</p> <p>Page 312 line 33 to page 313 line 8.</p> <p>Page 28 lines 25-29.</p>
		<p>Appendix A</p> <p>unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...</p> <p>Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local apparatus receives programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing</p> <p>[Signal processor 200 in Fig. 7 and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. References	Support to instant specification filed June 6, 1995. Language	Support to instant specification filed June 6, 1995. References	Support to instant specification filed June 6, 1995. Language
including in said information transmission a portion of information to be processed that identifies said content of said mass medium programming.	Column 11 lines 38-39.	By comparing identification signals on the incoming programming...	Page 327 line 35 to page 328 line 13.	<p>availability and usage.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>
Dependent Claim 175. The method of claim 174, wherein said portion of information is stored at a storage device	Column 11 lines 38-39.	By comparing identification signals on the incoming programming with the programming schedule ...	Page 327 line 35 to page 328 line 13.	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73,</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
					<p>Appendix A</p> <p>determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station, automatically adds, in a predetermined fashion source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected</p>
based on said step of transmitting.	Column 11 lines 3-14.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, along with information identifying the channel source of each signal, externally to code reader, 72. ... Code reader, 72, passes the received signals, with channel identifiers, to cable program controller and computer, 73.		<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 325 line 34 to page 326 line 11.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
			Page 326 lines 16-18.	messages, with said source mark information, to code reader, 72. Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73.
Dependent Claim 176. The method of claim 175, wherein said portion of information includes code which is operative to control said processor at each of said programming receiver stations, said method further comprising the step of including said code in said at least one control signal.				
Dependent Claim 177. The method of claim 18, wherein one of said first of said programming receiver stations and said second of said programming receiver stations is	Column 11 lines 3-5.			
		Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...	Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;...
	Column 17 lines 62-64.	Signal processor, 200, is always operating and monitors all incoming channels.	Page 397 lines 17-20.	Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	References	Language
programmed to process said at least one control signal	Column 9 lines 47-52.	The controller, 20, is programmed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.		mixer, 3, as described in example #5 above;....	Appendix A	
				Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.	Page 248 line 17 to page 249 line 5.	
				Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...	Page 257 line 24 to page 258 line 19.	
				Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.	Page 13 lines 25-26.	
based on one of a transmission location	Column 4 lines 5-6. Column 9 lines 53-55.	These techniques employ signals embedded in programs. The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40,		The present invention employs signals embedded in programming.	Page 257 line 24 to page 258 line 19.	Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause

Claim Language	References	Language	References	Language
<p>and time, said method further comprising the step of outputting said signal in said one of a transmission location and time.</p>	<p>Column 19 lines 60-63.</p>	<p>to receive a particular frequency at a particular time interval.</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.</p>	<p>Page 265 line 27 to Page 266 line 21.</p> <p>Page 59 lines 29-33.</p> <p>Page 25 line 34 to page</p>	<p>Appendix A</p> <p>the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
	Column 19 lines 43-44.			<p>26 line 1.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 21 lines 23-24.</p>	<p>Appendix A</p> <p>at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p>
Dependent Claim 178.					
<p>The method of claim 177, wherein said one of said first of said programming receiver stations and said second of said programming receiver stations is programmed to process said at least one control signal based on</p> <p>one of an interval of time and</p>	Column 17 lines 47-53.	<p>FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.</p> <p>The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.</p>	<p>Page 390 lines 30-35.</p> <p>Page 396 lines 8-10.</p> <p>Page 257 line 24 to page 258 line 19.</p>	<p>Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.</p> <p>Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
Appendix A		
a predetermined time.	Column 11 lines 25-28. Column 19 lines 8-9.	<p>Controller, 20, has capacity for keeping a track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>Such input information can indicate when and how the station should expect to receive each program unit,....</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p>
Dependent Claim 179. The method of claim 177, wherein said one of said first of said programming receiver	Column 11 lines 25-28.	Page 265 line 27 to Page 266 line 21.
	Column 19 lines 8-9.	Page 326 lines 33-35. Page 437 lines 1-3.
Dependent Claim 179. The method of claim 177, wherein said one of said first of said programming receiver	Column 17 lines 47-53.	Page 390 lines 30-35.
	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6;

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
stations and said second of said programming receiver stations is	6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Appendix A and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
programmed to process said at least one control signal	Column 11 lines 21-24. Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code ... Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to...	Page 396 lines 8-10. Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples. Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information. ...caused his microcomputer, 205, to be preprogrammed as described above;.... Microcomputer, 205, is preprogrammed to ... respond ... to ...
	Column 19 lines 42-43. The controller, 20, is programmed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.	Page 450 lines 31-32. Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.
	Column 9 lines 47-52. Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the	Page 21 lines 20-23. Page 248 line 17 to page 249 line 5. Page 257 line 24 to page 258 line 19.

Claim Language	References	Language	References	Support to instant specification filed June 6, 1995. Language
<p>based on a location in said information transmission.</p>	<p>Column 11 lines 38-39.</p>	<p>By comparing identification signals on the incoming programming...</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available,....</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.	Appendix A
Dependent Claim 180.			Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.	
The method of claim 179, further comprising the step of embedding said at least one control signal in said information transmission.	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.	
			Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.	
			Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor ...	
	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.	The present invention employs signals embedded in programming.	
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has	

Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
Claim Language	References	Language	References
		Appendix A	
		been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	
		SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....	Page 84 lines 26-28.
		... monitor information that identifies what programming is available,....	Page 28 lines 26-27.
		Meter-monitor segments contain meter information and/or monitor information.	Page 49 lines 26-27.
	...instruction signals embedded in the "Wall Street Week" programming transmission.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.
Column 19 lines 43-44.		Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synch command.	Page 250 lines 13-17.
Column 9 lines 55-57.	This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.	Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...	Page 251 lines 8-11.
		... said information to radio decoder, 42,	Page 263 lines 19-24.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Support to instant specification filed June 6, 1995.
Language	Language	References	Language
			Appendix A
Dependent Claim 181.			
The method of claim 180, further comprising the step of embedding a portion of said mass medium programming	Column 19 lines 60-63.	<p>Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both.</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.</p>	<p>which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.</p> <p>Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both.</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p>
		<p>Column 7 lines 50-54.</p>	<p>Page 37 lines 26-28.</p> <p>Page 31 lines 10-14.</p>

Claim Language	References	Language	References	Support to instant specification filed June 6, 1995. Language
				Appendix A
	<p>Column 4 lines 5-6.</p> <p>Column 11 lines 38-39.</p>	<p>These techniques employ signals embedded in programs.</p> <p>By comparing identification signals on the incoming programming...</p>	<p>20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 13 lines 25-26.</p> <p>Page 327 line 35 to page 328 line 13.</p>	<p>The present invention employs signals embedded in programming.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>...monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p>
	Column 19 lines 43-44.	...instruction signals embedded in the "Wall Street Week" programming transmission.	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 21 lines 23-24.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

Claim 182.				
The method of claim 18, further comprising the step of: including in one of said mass medium programming and said at least one control signal a first portion of information which				
	Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion...	Page 30 lines 7-9.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.
enables one of said programming receiver stations to	Column 7 lines 37-39.	...that enables buffer/comparator, 8, among other things, to assemble signal units from signal words.	Page 36 line 32 to page 37 line 3. Page 37 lines 22 to page 38 line 10.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs Controller, 39, 44, or 47, is preprogrammed to receive units of signal information, to assemble said units into signal words that subscriber station apparatus can receive and process, and to transfer said words to said apparatus. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
<p>select one of a second portion of information and</p> <p>a device to which to communicate a second portion of information.</p>	<p>Column 7 lines 54-58.</p> <p>Column 7 lines 54-58.</p>	<p>If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.</p> <p>If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.</p>	<p>Page 156 line 33.</p> <p>Page 157 lines 5-7.</p> <p>Page 14 lines 22-25.</p> <p>Page 31 lines 14-18.</p> <p>Page 31 lines 14-18.</p>	<p>to transfer said signals to said apparatus. Said controller, 39, 44, or 47, has one or more output ports for communicating signal information to said apparatus.</p> <p>Fig. 3A shows one such preferred controller, 39.</p> <p>Buffer, 39C, and processor, 39D, are the second buffer and processor and perform protocol conversion functions.</p> <p>In all cases, signals may convey information in discrete words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction.</p> <p>If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.</p> <p>If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.</p>	<p>Appendix A</p>
<p>Dependent Claim 183.</p> <p>The method of claim 182, further comprising the steps of:</p> <p>communicating said second portion of information to a storage</p>	<p>Column 11 lines 3-14.</p>	<p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from</p>	<p>Page 325 line 34 to page 326 line 11.</p>	<p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier,</p>	

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
		References	Language
device; and		their associated programming and pass them, along with information identifying the channel source of each signal, externally to code reader, 72. ... Code reader, 72, passes the received signals, with channel identifiers, to cable program controller and computer, 73.	63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69; or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station, automatically adds, in a predetermined fashion source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.
storing said second portion of information.		Column 11 lines 38-39.	Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
		Page 326 lines 16-18.	Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
		Page 327 line 35 to page 328 line 13.	Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
		Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	References	Language
					<p>transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>	Appendix A
Dependent Claim 184.				<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p>		
The method of claim 183, wherein said device to which to communicate said second portion of information comprises a computer and	<p>Column 11 lines 12-14.</p> <p>Column 19 lines 63-64.</p>	<p>Code reader, 72, passes the received signals, with channel identifiers, to cable program controller and computer, 73.</p> <p>This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p>	<p>Page 326 lines 16-18.</p> <p>Page 26 lines 1-2.</p> <p>Page 37 line 26 to page 38 line 8.</p>		<p>Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73.</p> <p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission</p>	
said second portion of information includes a first instruction to be communicated to said computer, said method further comprising the step of including said second portion of information in said at least one control signal.	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...	Page 325 line 34 to page 326 line 7.			

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	References	Language
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming...		station;.... Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... monitor information that identifies what programming is available,.... Meter-monitor segments contain meter information and/or monitor information. Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...	Page 327 line 35 to page 328 line 13.	
	Column 19 lines 60-66.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first			Page 84 lines 26-28. Page 28 lines 26-27. Page 49 lines 26-27. Page 25 line 33 to page 26 line 2..	

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. References	Support to instant specification filed June 6, 1995. Language	Support to instant specification filed June 6, 1995. References	Support to instant specification filed June 6, 1995. Language
		overlay to TV set, 202, ...	Page 37 line 26 to page 38 line 8.	Appendix A In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
Dependent Claim 185. The method of claim 184, wherein signal content	Column 15 lines 57-62.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.	Page 26 lines 4-8. Page 315 lines 20-24. Page 44 lines 26-32.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned. Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A

			assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.	
			Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ...	Page 49 line 26 to Page 50 line 4.
			The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. They occur at precise times in programming and can synchronize the operation of receiver station apparatus to the timing of programming transmissions. They can be conveniently monitored.	Page 13 lines 25-32.
enables said one of said programming receiver stations to communicate to a remote station	Column 4 lines 5-13.	These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing, , that they can convey signals to equipment that must switch manners or modes of operation during transmissions of individual units of programming, and that they can be monitored.	Signal processor, 71, also has signal record said signals and transfer them to external communications network, 97.	Page 326 lines 11-15.
	Column 12 lines 54-56.	Signal processors, 71 and 96, can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively.	And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.	Page 337 lines 19-21.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Language	References	Support to instant specification filed June 6, 1995.	Language
	Column 18 lines 29-41.	FIG. 6B also shows signal processor, 200, monitoring for a data gathering and ratings service.	Page 411 lines 10-11.	In addition, because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, ...	Appendix A
		TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...	Page 88 lines 19-22.	... monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen Company) that collect statistics on viewership and programming usage.	
			Page 408 lines 18-29.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above escribed fashion.	
			Page 414 lines 13-27.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44.	
			Page 15 lines 16-22.	The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...	
	The processors, 204 and 210, transfer this		Page 36 lines 32-33.	Each decoder is controlled by a controller, 39,	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	References	References
Language	Language	Language
		<p>Appendix A</p> <p>collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3).")</p> <p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...</p>
	<p>Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.</p>	<p>page 174 line 23- from example #3.</p>
		<p>Page 419 lines 4-15.</p>
		<p>Page 28 lines 25-35.</p>
		<p>Page 397 lines 17-20.</p>

Claim Language	References	Language	References	Language
				Appendix A
information evidencing one of (i) receipt of a portion of said information transmission and	Column 11 lines 8-10.	Signal processor, 71, also has means to record said signals and transfer them to external communications network, 97.	Page 326 lines 11-15.	Signal processor system, 71, also has signal processor means to control signal processor system, 71, to record meter-monitor information of said message information, and to transfer recorded information to external communications network, 97.
	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
	Column 18 lines 38-41.	Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.	Page 28 lines 25-35.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
			Page 397 lines 17-20.	Each subscriber station signal processor, 200,

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. References	Language	Support to instant specification filed June 6, 1995. References	Language
(ii) a function performed in response to a portion of said information transmission, said method further comprising the step of including said signal content in one of said mass medium programming and said at least one control signal.	<p>Column 12 lines 54-56.</p> <p>Column 12 lines 45-53.</p> <p>Column 18 lines 30-37.</p>	<p>Signal processors, 71 and 96, can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively.</p> <p>Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs.</p> <p>TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV</p>	<p>Page 337 lines 19-21.</p> <p>Page 337 lines 1-19.</p> <p>Page 408 lines 18-29</p>	<p>Appendix A</p> <p>operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...</p> <p>And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.</p> <p>Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information</p>

Claim Language	References	Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.
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Appendix A

		set, 202, and radio, 209, are tuned,		Page 414 lines 13-27	of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion. Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44.
				Page 15 lines 16-22	The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...
		The processors, 204 and 210, transfer this information to signal processor, 200, ...		Page 36 lines 32-33.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.
				Page 38 lines 11-14.	Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.
				Page 411 lines 10-15	... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995
References	References	Language
		Appendix A
		<p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1" monitor information (#3).")</p> <p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to</p>
	<p>Page 418 line 23 to page 419 line 15.</p> <p>Page 411 line 28 to page 412 line 2.</p> <p>Page 173 line 30 to page 174 line 23 from example #3.</p> <p>Page 419 lines 4-15.</p>	
<p>... for recording and subsequent transmission to a remote data collection site.</p>		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

		<p>initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p>
	<p>Page 28 lines 25-35.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
	<p>Page 327 line 35 to page 328 line 13.</p>	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming</p>
	<p>Page 84 lines 26-28.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
	References		Language	References	Language
				<p>transmissions....</p> <p>...monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C....</p> <p>Via a conventional multi-channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...</p> <p>Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter-monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment) then meter-monitor segment information that includes the "program unit identification</p>	Appendix A
				<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 435 lines 16-18.</p> <p>Page 248 lines 22-26 from example #5.</p> <p>Page 250 lines 13-16 from example #5.</p> <p>Page 252 lines 15-35 from example #5.</p>	
	<p>...pass all program and channel identifiers on all programming being cablecast on the multi-channel system.</p>	<p>Column 19 lines 14-15.</p>			

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A		
		code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...
		All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
		A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
		At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
		The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
Page 267 lines 20-28 from example #5.		
Page 59 lines 29-33.		
Page 25 line 34 to page 26 line 1.		
Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and		
Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

said signal content is communicated to said remote station, said method further comprising one step from the group consisting of:	Column 18 lines 22-25.	Monitor or processor, 204, also identifies signals addressed to tuner, 213, which it transfers accordingly. These signals instruct tuner, 213, to tune radio, 209, to the proper frequency for the simulcast.	Page 28 lines 26-27. Page 49 lines 26-27. Page 408 lines 31-34.	... monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information. Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.
	Column 11 lines 8-10.	Signal processor, 71, also has means to record said signals and transfer them to external communications network, 97.	Page 410 lines 10-11.	Receiving said SPAM message causes said controller, 44, ... to ... tune radio, 209, to the frequency, ...
	Column 12 lines 54-56.	Signal processors, 71 and 96, can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively.	Page 326 lines 11-15.	Signal processor system, 71, also has signal processor means to control signal processor system, 71, to record meter-monitor information of said message information, and to transfer recorded information to external communications network, 97.
	Column 18 lines 29-41.	FIG. 6B also shows signal processor, 200, monitoring for a data gathering and ratings service.	Page 337 lines 19-21.	And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.
			Page 411 lines 10-11.	In addition, because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, ...
			Page 88 lines 19-22.	... monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen Company) that collect statistics on viewership and programming usage.
			Page 408 lines 18-29.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ...

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	References	Language
	<p>respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...</p>	<p>Page 414 lines 13-27.</p>	<p>a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of</p>
	<p>The processors, 204 and 210, transfer this information to signal processor, 200, ...</p>	<p>Page 15 lines 16-22.</p>	
		<p>Page 36 lines 32-33.</p>	
		<p>Page 38 lines 11-14.</p>	
		<p>Page 411 lines 10-15.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Language	References	Support to instant specification filed June 6, 1995.	Language
				said signal processor, 200, in the fashion of example #3 above.	Appendix A
				Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.	
	... for recording and subsequent transmission to a remote data collection site.		Page 411 line 28 to page 412 line 2.	In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in ...	
			Page 173 line 30 to page 174 line 23 from example #3.	The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synchron command, and said information transmitted to buffer/comparator, 14, is called, hereinafter,	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	References	Language
				Appendix A		
				the "1 st monitor information (#3)."		
				In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.	Page 419 lines 4-15.	
			Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programing availability to record and transmit to a remote site.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.	Page 28 lines 25-35.	
				Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...	Page 397 lines 17-20.	
including an identifier in said signal content;	Column 15 lines 57-62.		The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.	Page 315 lines 20-24.	
				Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records	Page 44 lines 26-32.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
				<p>to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.</p> <p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <ul style="list-style-type: none"> ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ... <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p>	Appendix A
	<p>Column 11 lines 38-39.</p>	<p>By comparing identification signals on the incoming programming ...</p>	<p>Page 49 line 26 to Page 50 line 4.</p>	<p>to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.</p> <p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <ul style="list-style-type: none"> ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ... <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p>	
			<p>Page 327 line 35 to page 328 line 13.</p>		
			<p>Page 84 lines 26-28.</p>		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
Column 19 lines 20-23.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	... monitor information that identifies what programming is available,....
		Meter-monitor segments contain meter information and/or monitor information.
		All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
		In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...
		Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.
		Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said
		please-fully-enable-WSW-on-CC13-at-particular-8:30 information.
		Page 28 lines 26-27.
		Page 49 lines 26-27.
		Page 267 lines 20-28 from example #5.
		Page 435 lines 16-25.
		Page 436 line 9 to page 437 line 3.

Appendix A

Claim Language	References	Language	References	Language
Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A		
including said signal content in said first portion of information; and	Column 15 lines 57-62.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.	Page 439 lines 14-15. Page 315 lines 20-24. Page 44 lines 26-32. Page 49 line 26 to	<p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13;...</p>
				<p>Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.</p> <p>Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.</p> <p>Meter-monitor segments contain meter</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	References	Language
					Appendix A	
	including said first portion of information in said at least one control signal.	Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion...	Page 50 line 4.	information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ...	
	Column 7 lines 36-37.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs	Page 30 lines 7-9.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.	
	Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion...	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs	Page 36 line 32 to page 37 line 3.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.	
	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS	Page 30 lines 7-9.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.	
	Page 36 line 32 to page 37 line 3.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS	Page 325 line 34 to page 326 line 7.		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
	Column 17 lines 39-41.	Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming transmissions,...	Page 15 lines 16-23.	apparatus of said intermediate transmission station;.... The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information;....
Dependent Claim 187.				
The method of claim 182, wherein said one of said programming receiver stations includes a computer and	Column 11 lines 15-17.	Cable program controller and computer, 73, is the central automatic control unit for the transmission facility.	Page 326 lines 19-20.	Cable program controller and computer, 73, is the central automatic control unit for the transmission station.
	Column 19 lines 42-43.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to...	Page 450 lines 31-32.	...caused his microcomputer, 205, to be preprogrammed as described above;....
			Page 21 lines 20-23.	Microcomputer, 205, is preprogrammed to ... respond ... to ...
	Column 11 lines 21-31.	Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code (which in the case of advertising might be a purchase order number). Such input information might also indicate when and where the cable head end facility should expect to receive the programming. Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 30 to page 327 line 2.	Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information. Such input information can indicate when and how the station should expect to receive each program unit;.... Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...
a plurality of first instructions program said computer to	Column 19 lines 45-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...	Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
		Appendix A
... several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
These signals instruct microcomputer, 205, ...	Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
... to generate several graphic video overlays, ...	Page 24 lines 5-16.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."
	Page 451 lines 7-11.	...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	References	Language
respond to one of a	Column 11 lines 38-43.	... which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to ...	Page 19 line 29 to page 20 line 20.	Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.	Appendix A	
		... transmit these overlays to TV set, 202, ...				
		... upon command.				
			Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.		
			Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.		
			Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)		
			Page 327 line 35 to	Computer, 73, monitors incoming		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
<p>command and a second instruction, said method further comprising one step of the group consisting of:</p>	<p>incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>page 328 line 13.</p> <p>programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of</p>
	<p>Column 19 lines 46-53.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 23 line 35 to page 24 line 16.</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A

			<p>instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>... with information of the programming schedule, received earlier from input, 74, and/or network, 98, ...</p> <p>... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.</p> <p>... embedded in the programming transmission, and transmitted.</p>
			<p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>
transmitting said plurality of first instructions; and	Column 11 lines 39-41.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, ...	<p>Page 328 lines 9-10.</p> <p>Page 326 lines 28-30.</p> <p>Page 25 line 35 to page 26 line 1.</p>
	Column 19 lines 62-63	... and is transmitted in the programming transmission.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
	Language	Language

	Column 19 lines 43-53.	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>... several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.</p> <p>These signals instruct microcomputer, 205, ...</p>	<p>Page 21 lines 23-24.</p> <p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-16.</p>	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p>
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Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

		... to generate several graphic video overlays, ...	Page 451 lines 7-11.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
		... which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to ...	Page 19 line 29 to page 20 line 20.	Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.
		... transmit these overlays to TV set, 202, ...	Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
		... upon command.	Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.
			Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command in

Appendix A

Claim Language	References	Language	References	Language
				Support to instant specification filed June 6, 1995.
				<p>determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate television or radio or other programming transmissions....</p> <p>...monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred;</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. References	Language	Support to instant specification filed June 6, 1995. References	Language
		<p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p>	Page 26 lines 4-11.	<p>and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p>
<p>Dependent Claim 188.</p> <p>The method of claim 18, wherein said at least one control signal is for controlling said first of said programming receiver stations to transmit said mass medium programming to said second of said programming receiver stations to</p>	Column 11 lines 38-43.	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 327 line 35 to page 328 line 13.</p> <p>Page 84 lines 26-28.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
	References	Language	References	Language	Appendix A
	<p>Column 11 lines 50-57.</p>	<p>... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>... caused his microcomputer, 205, to be preprogrammed as described above; ...</p> <p>Microcomputer, 205, is preprogrammed to ... respond ... to instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital</p>	
control said second of said programming receiver stations.	<p>Column 19 lines 42-49.</p>	<p>Microcomputer, 205, is preprogramed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programing transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>... several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.</p>	<p>Page 450 lines 31-32.</p> <p>Page 21 lines 20-24.</p> <p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p>		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A				
				signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
			Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
		These signals instruct microcomputer, 205, ...	Page 24 lines 5-6.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A

<p>Dependent Claim 189.</p> <p>The method of claim 23, wherein said at least one control signal is for controlling said first of said receiver stations to compare a portion of said information transmission to a programming schedule and to</p>	Column 11 lines 32-39.	<p>By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75.</p> <p>By comparing identification signals on the incoming programming with the programming schedule ...</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
			Page 84 lines 26-28.	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p>
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
	Column 11 lines 38-43.	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73,</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
	<p>head end facility should transmit the programming.</p> <p>Column 11 lines 50-57.</p> <p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>			<p>determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission</p>	Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
Dependent Claim 190. The method of claim 23, wherein said at least one control signal is for controlling transmission of said information to a programming schedule and				inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
	Column 4 lines 5-9. Column 11 lines 38-43.	These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. ... By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 13 lines 25-28. Page 327 line 35 to page 328 line 13.	The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to	Page 84 lines 26-28. Page 28 lines 26-27.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. References	Language	Support to instant specification filed June 6, 1995. References	Language
		transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	<p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p> <p>Page 337 lines 1-19.</p>	<p>Appendix A</p> <p>programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5.</p>
logging of transmission of said information transmission.	Column 12 lines 45-53.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs.		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
				By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.
Dependent Claim 191.				
The method of claim 23, wherein said at least one control signal is for controlling transmission of said information to a programming schedule and	Column 4 lines 5-9.	These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. ...	Page 13 lines 25-28.	The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.
	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. References	Language	References	Support to instant specification filed June 6, 1995. Language
<p>generation of statistics pertaining to said information transmission.</p>	<p>Column 11 lines 50-57.</p>	<p>... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p> <p>Page 312 line 33 to page 313 line 8.</p>	<p>Appendix A</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular programmed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local apparatus receives programming and which displays</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
	References	Language	References	Language	Appendix A
	Column 18 lines 29-41.		Page 28 lines 25-29.	programming, how received programming is processed, what local apparatus is controlled in the course of processing	[Signal processor 200 in Fig. 7 and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage.
	FIG. 6B also shows signal processor, 200, monitoring for a data gathering and ratings service.	Page 411 lines 10-11.	Page 88 lines 19-22.	In addition, because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen Company) that collect statistics on viewership and programming usage.
	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...	Page 408 lines 18-29.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ...	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the secondary "program unit identification code" information of the audio program unit of said radio transmission ...	Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above escribed fashion.
	Page 414 lines 13-27.				Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the secondary "program unit identification code" information of the audio program unit of said radio transmission ...
					Said message is detected at said decoder, 210, and inputted to said controller, 44.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	References	Language
		<p>The processors, 204 and 210, transfer this information to signal processor, 200, ...</p>	<p>Page 15 lines 16-22.</p> <p>Page 36 lines 32-33.</p> <p>Page 38 lines 11-14.</p> <p>Page 411 lines 10-15.</p> <p>Page 418 line 23 to page 419 line 15.</p>	<p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus. ... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p>	Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
	... for recording and subsequent transmission to a remote data collection site.		Page 411 line 28 to page 412 line 2.	In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in ...
			Page 173 line 30 to page 174 line 23 from example #3.	The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1 st " monitor information (#3).")
			Page 419 lines 4-15.	In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.
	Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.		Page 28 lines 25-35.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
			Page 397 lines 17-20.	that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage. Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...
Dependent Claim 192. The method of claim 23, wherein said at least one control signal is for controlling transmission of said information to a programming schedule and	Column 4 lines 5-9. Column 11 lines 38-43.	These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. ... By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 13 lines 25-28. Page 327 line 35 to page 328 line 13.	The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	References	Language
<p>identification of content of said information transmission.</p>	<p>Column 11 lines 50-57.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p> <p>Page 315 lines 20-24.</p>	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.</p>
	<p>... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>		
	<p>Column 15 lines 57-62.</p>	<p>The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
	References	References	Language
		<p>Page 44 lines 26-32.</p> <p>Page 49 line 26 to Page 50 line 4.</p>	<p>Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.</p> <p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <ul style="list-style-type: none"> ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ...
<p>Dependent Claim 193.</p> <p>The method of claim 23, wherein said at least one control signal is for controlling transmission of said information transmission according to a programming schedule and</p>	<p>Column 4 lines 5-9.</p> <p>Column 11 lines 38-43.</p>	<p>Page 13 lines 25-28.</p> <p>Page 327 line 35 to page 328 line 13.</p>	<p>The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
				<p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>	Appendix A
			<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 323 line 22 to page 329 line 1.</p>		
	<p>Column 11 lines 50-57.</p>	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>			

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
output of an identifier of said information transmission to a remote data collection station.	Column 12 lines 45-56.	Page 337 lines 1-21.
	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs. Signal processors, 71 and 96, can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs. And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.
Dependent Claim 194.		
The method of claim 23, wherein said at least one control signal is for controlling identification of content of said information transmission and for	Column 11 lines 32-39.	Page 327 line 35 to page 328 line 13.
	By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75. By comparing identification signals on the incoming programming with the	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution

Appendix A

Claim Language	References	Language	References	Language
		<p>programming schedule ...</p>		<p>amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
controlling a switch to communicate said content.	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 327 line 35 to page 328 line 13.</p>	<p>Appendix A</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. References	Language	Support to instant specification filed June 6, 1995. References	Language
	Column 11 lines 50-57.	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87,</p> <p>controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>Appendix A</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
Dependent Claim 195. The method of claim 23, wherein said at least one control signal is for controlling identification of content of said information	Column 11 lines 32-39.	By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each	Page 327 line 35 to page 328 line 13.	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73,</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995	Language
Appendix A					
transmission and	individual wire to matrix switch, 75. By comparing identification signals on the incoming programming with the programming schedule ...		determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.		
delay of transmission of said content.	Column 11 lines 38-43.	Page 84 lines 26-28. Page 28 lines 26-27. Page 49 lines 26-27. Page 327 line 35 to page 328 line 13.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	References	Language
	<p>Column 11 lines 57-65.</p>	<p>Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.</p>		<p>channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 329 line 2-22.</p>	<p>Appendix A</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A

				said selected recorder, 76 or 78, to record said programming.
Dependent Claim 196.				
The method of claim 23, wherein said signal is for controlling selection of a storage location and	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ...
			Page 28 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
			Page 49 lines 26-27.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given
	Column 11 lines 57-61.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/computer, 73, selects a video recorder/player, 76 or 78, ...	Page 329 line 2-15.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
<p>storage of a portion of said information transmission at said selected storage location.</p>	<p>Column 11 lines 57-65.</p>	<p>Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.</p>
		<p>Page 329 line 2-22.</p>
		<p>SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; ...</p> <p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A		
programming.		
Dependent Claim 197.		
The method of claim 23, wherein said at least one control signal is for	Column 11 lines 38-43.	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
		<p>Page 327 line 35 to page 328 line 13.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions...</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program</p>
		<p>Page 84 lines 26-28.</p>
		<p>Page 28 lines 26-27.</p>
		<p>Page 49 lines 26-27.</p>
		<p>Page 329 line 2-22.</p>
controlling delay of transmission of said information transmission.	Column 11 lines 57-65.	<p>Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
	References	Language	References	Language	Appendix A
		incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.			unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.
Dependent Claim 198.					
The method of claim 23, wherein said at least one control signal is for	Column 18 lines 56-58.	...signal processor, 200, to hold examples of the sought for unique signals in its buffer/comparator, 8, and compare them with all incoming signals.	Page 420 lines 6-20.	The signal processor, 200, of said station is preprogrammed ... with particular news-items-of-interest information that includes identification information of the particular stocks in said portfolio.... One company whose stock is preprogrammed at said microprocessor, 205, is the American Telephone and Telegraph Company whose stock is identified by particular binary information of "T". And among the news-items-of-interest information at said RAM is an instance of said binary information of "T". ...said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
					Appendix A
controlling said second of said receiver stations to receive said information transmission.	Column 19 lines 20-25.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...	Page 267 lines 20-28 from example #5.	determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information.... All eight of said messages are commands. The 1st- and 3rd-new-radio-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) By contrast, the...	
			Page 435 lines 16-25.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ... Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.	
			Page 436 line 9 to page 437 line 3.	Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.	Executing said determine-whether-to-select

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	References	References
Language	Language	Language
		<p>Appendix A</p> <p>instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week"</i> <i>program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20. ...to receive the transmission of cable channel 13; ... Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particu- lar- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatusto cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p>
		<p>Page 439 lines 14-15.</p> <p>Page 437 lines 1-6.</p> <p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
Dependent Claim 199. The method of claim 23, wherein said at least one controlling signal is for controlling transmission of said information transmission according to a transmission schedule and for			Page 439 lines 9-15.	...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions...
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53,	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
	Appendix A	Language
controlling said second of said receiver stations to store said information transmission.	<p>should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p> <p>Column 18 lines 56-58.</p>	<p>unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>The signal processor, 200, of said station is preprogrammed ... with particular news-items-of-interest information that includes identification information of the particular stocks in said portfolio....</p> <p>One company whose stock is preprogrammed at said microprocessor, 205, is the American Telephone and Telegraph Company whose stock is identified by particular binary information of "T". And among the news-items-of-interest information at said RAM is an instance of said binary information of "T".</p> <p>...said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information....</p> <p>Page 420 lines 6-20.</p> <p>Page 422 lines 33 to Page 423 line 4.</p> <p>Page 267 lines 20-28</p> <p>All eight of said messages are commands.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
	predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...		from example #5. Page 435 lines 16-25. Page 436 line 9 to page 437 line 3.	<p>The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8-30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects</i></p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	References	Language
						Appendix A
				<i>the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</i> <i>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</i> <i>... to receive the transmission of cable channel 13; ...</i> <i>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</i> <i>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</i> <i>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</i> <i>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert ...</i> <i>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</i>	Page 439 lines 14-15. 	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Dependent Claim 200. The method of claim 23, wherein said at least one control signal is for controlling said network to transmit said information at a specific time and			Page 445 lines 24-27.	... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, ...
			Page 446 lines 18-23.	... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
References	References	References
	<p>Column 11 lines 50-57.</p> <p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87.</p> <p>controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p> <p>Column 19 line 60 to column 20 line 1.</p> <p>to generate output information.</p>	<p>Page 328 line 22 to page 329 line 1.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>Page 25 line 34 to page 26 line 2.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the</p>

Appendix A

Claim Language	References	Language	References	Language
Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981. Support to instant specification filed June 6, 1995.				
				Appendix A
		<p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p>	<p>Page 26 lines 4-11.</p>	<p>art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p>
<p>Dependent Claim 201.</p> <p>The method of claim 23, wherein said at least one control signal is for controlling said network to generate information to</p>	<p>Column 19 line 60 to column 20 line 1.</p>	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p>	<p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	References	Language
					Appendix A station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
complete said information transmission and to output said generated information with said information transmission.	Column 19 lines 59-60.		This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ... Then the host says, "And here is what your portfolio did."	Page 26 lines 4-11. Page 25 lines 33-34.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ... Then the host says, "And here is what your portfolio did."
Dependent Claim 202.					
The method of claim 23, wherein at least one control signal is for controlling said network to transmit said information transmission according to a programming schedule and to	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programing schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.		Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	References	
	References	Language	References	Language
				<p>Appendix A</p> <p>network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall</p>
process a response at said second of said receiver stations to	Column 19 lines 42-44.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall	Page 21 lines 20-24.	
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 84 lines 26-28. Page 28 lines 26-27. Page 49 lines 26-27. Page 328 line 22 to page 329 line 1.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
<p>information contained in said information transmission.</p>	<p>Column 19 line 60 to column 20 line 1.</p>	<p>Street Week" programming transmission.</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p> <p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p>	<p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 26 lines 4-11.</p>	<p>Street Week" programming transmission.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p>	<p>Appendix A</p>

Dependent

Claim Language	References	Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.
Appendix A						
Claim 203. The method of claim 23, wherein said at least one control signal is for controlling transmission of said information transmission according to a programming schedule and	Column 11 lines 38-43.		By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.		Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
				Page 84 lines 26-28.		SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
				Page 28 lines 26-27.		... monitor information that identifies what programming is available, ...
				Page 49 lines 26-27.		Meter-monitor segments contain meter information and/or monitor information.
	Column 11 lines 50-57.		... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that	Page 328 line 22 to page 329 line 1.		For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A	
References	Language	References	Language	Language
<p>output of said information transmission at said second of said receiver stations.</p>	<p>Column 19 lines 20-25:</p>	<p>leads to modulator, 87.</p> <p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...</p>	<p>Page 267 lines 20-28 from example #5.</p>	<p>programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) By contrast, the...</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The</p>
			<p>Page 435 lines 16-25.</p>	
			<p>Page 436 line 9 to page 437 line 3.</p>	

Claim Language	References	Language	References	Language
				<p>information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13; ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	References	Language
			<p>receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p>
Dependent Claim 204.			
<p>The method of claim 23, wherein said at least one control signal is for controlling decryption of a portion of said information transmission.</p>	<p>Column 20 lines 37-42.</p> <p>The signal transmission from processor, 204, also passes a signal word to signal processor, 200, ...</p> <p>... which, in a predetermined fashion, signal processor, 200, decrypts and transfers...</p>	<p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p> <p>Page 477 lines 8-23.</p> <p>Page 281 lines 1-6.</p> <p>Page 282 line 2 to page 283 line 33.</p>	<p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...</p> <p>By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")</p> <p>... the information of said segments is encrypted prior to transmission ...</p> <p>The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A	
References	Language	Language	References	Language
				<p>supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ...</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "11111".</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p>
Dependent Claim 205.		<p>... to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.</p>	<p>Page 478 lines 1-5.</p>	
<p>The method of claim 23, wherein said at least one control signal is for controlling transmission of said information transmission according to a schedule and</p>	<p>Column 11 lines 38-43.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	References	Language
						Appendix A
					Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
					Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
					Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87.			Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
output of said information transmission	Column 19 lines 20-29.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.			Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
		<p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>are called "guide commands" because they can guide station control apparatus to desired programming.) By contrast, the ...</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	Language	Language
			<p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its</p> <p>...</p> <p>...instructions causes controller, 20, ...; to switch power on to video recorder/player, 217,</p> <p>...</p> <p>...controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p> <p>...instructions causes controller, 20, to switch power on to monitor, 202M, ...</p> <p>Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...</p>
	<p>Then, in a predetermined fashion, microcomputer, 205, may ...</p> <p>... instruct tuner, 214, to switch box, 201, to channel X ...</p> <p>... and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...</p> <p>... and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on</p> <p>...</p>	<p>Page 437 lines 1-6.</p> <p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p> <p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p> <p>Page 445 line 24 to page 446 line 1.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
		... and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 35 to page 446 line 1. Page 446 lines 17-21.	...and to tune monitor, 202M, in a predetermined fashion. In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
as a portion of	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
a multimedia presentation.	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
Dependent Claim 206.				
The method of claim 23, wherein said first of said receiver stations and	Column 11 lines 38-39.	By comparing identification signals on the incoming programming with the programming schedule ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	References	References
Language	Language	Language
<p>said second of said receiver stations each identify content of said information transmission by processing one of said at least one control signal and</p>	<p>Column 19 lines 20-23.</p> <p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p>

Claim Language	References	Language	References	Language
			<p>Page 436 line 9 to page 437 line 3.</p>	<p>Appendix A</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13;...</p> <p>At signal processor system, 71, which is a</p>
said at least one	Column 11 lines 3-5.	Signal processor, 71, has means, described	<p>Page 439 lines 14-15.</p> <p>Page 325 line 34 to</p>	

Claim Language	References	Language	References	Support to instant specification filed June 6, 1995. Language
<p>designation signal, said method further comprising the step of</p>	<p>above, to identify and separate the instruction and information signals from their associated programming and pass them, ...</p> <p>... processor or monitor, 12, ... reacts, ... by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.</p> <p>Column 19 lines 17-20.</p>	<p>system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that-processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station; automatically adds, in a predetermined fashion, source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, ...</p> <p>... microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially</p>	<p>page 326 line 10.</p> <p>Page 288 lines 16-20.</p> <p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25</p>	<p>Appendix A</p>

Claim Language	References	Language	References	Language
			from example #5.	<p>all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>...monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>
including an identifier in said one of said at least one control signal and	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	
			Page 84 lines 26-28.	
			Page 28 lines 26-27.	
			Page 49 lines 26-27.	

Appendix A

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
		References	Language	References	Language
said at least one designation signal.		Column 7 lines 54-58.	If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 31 lines 14-18.	If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.
Dependent Claim 207.					
The method of claim 206, wherein said identifier identifies one of television and radio programming, said method further comprising the step of		Column 11 lines 38-39.	By comparing identification signals on the incoming programming...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
				Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
				Page 28 lines 26-27.	...monitor information that identifies what programming is available,....
				Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
	<p>Column 12 lines 57-61.</p>	<p>This particular embodiment describes a transmission facility transmitting only television programming. The facility could also process and transmit radio programming and other electronic data according to the methods described here ...</p>	<p>Page 339 lines 9-26.</p>	<p>So far this disclosure has described an intermediate transmission station that transmits conventional television programming; however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...</p>	<p>Appendix A</p>
<p>including said one of television and radio programming in said information transmission.</p>	<p>Column 10 lines 61-64.</p>	<p>Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.</p>	<p>Page 324 lines 23-33.</p>	<p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...</p>	
	<p>Column 12 lines 57-61.</p>	<p>This particular embodiment describes a transmission facility transmitting only television programming. The facility could also process and transmit radio programming and other electronic data according to the methods described here ...</p>	<p>Page 339 lines 9-26.</p>	<p>So far this disclosure has described an intermediate transmission station that transmits conventional television programming; however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
Dependent Claim 208. The method of claim 206, wherein said identifier identifies one of video and audio, said method further comprising the step of				communications programming ...
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...
			Page 28 lines 26-27.	... monitor information that identifies what programming is available,....
	Column 12 lines 57-58.	This particular embodiment describes a transmission facility transmitting only television programming.	Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
including said one of	Column 10 lines 61-64.	Incoming programming transmissions are	Page 339 lines 9-11.	So far this disclosure has described an intermediate transmission station that transmits conventional television programming....
			Page 324 lines 23-33.	The station receives programming from many

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
video and audio in said information transmission.		received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.		sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
	Column 12 lines 57-58.	This particular embodiment describes a transmission facility transmitting only television programming.	Page 339 lines 9-11.	So far this disclosure has described an intermediate transmission station that transmits conventional television programming....
Dependent Claim 209. The method of claim 206, wherein said identifier identifies one of a datum and an instruction, said method further comprising the step of	Column 11 lines 38-39.	By comparing identification signals on the incoming programming...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.

Appendix A

Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
Claim Language	References	Language	Language
		References	Appendix A
		Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions
		Page 28 line 26-27.	... monitor information that identifies what programming is available,....
		Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
	Column 7 lines 54-58.	Page 31 lines 14-18.	If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.
	Column 17 line 44.	Page 95 lines 18-21.	Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to ... and to transfer said message to ...
including said one of a datum and an instruction in said information transmission.	Column 19 lines 60-65.	Page 25 line 33 to page 26 line 2.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...
		Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	References	References	Language
Appendix A			
			known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
Dependent Claim 210.		Page 26 line 4.	Said signal instructs microcomputer, 205, ...
The method of claim 23, wherein said first of said receiver stations and said second of said receiver stations each monitor one of availability, use, and usage of content of said information transmission, said method further comprising the step of	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....
	Column 11 lines 6-7.	...pass them, along with information identifying the channel source of each signal, externally to code reader, 72.	...adds, ... source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.
	Column 11 lines 8-10.	Signal processor, 71, also has means to record said signals and transfer them to external communications network, 97.	Signal processor system, 71, also has signal processor means to control signal processor system, 71,...
	Column 12 lines 45-56.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language	References	Language
	<p>apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs. Signal processors, 71 and 96, can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively.</p>	<p>FIG. 6B also shows signal processor, 200, monitoring for a data gathering and ratings service.</p>	<p>TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...</p>	<p>programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs. And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.</p>	<p>In addition, because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, ...</p> <p>... monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen Company) that collect statistics on viewership and programming usage.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ...</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	References	Language
<p>including in said information transmission a portion of information to be processed that identifies said content of said information transmission.</p>		<p>Page 414 lines 13-27.</p> <p>Page 15 lines 16-22.</p> <p>Page 36 lines 32-33.</p> <p>Page 38 lines 11-14.</p> <p>Page 411 lines 10-15.</p>	<p>Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ...</p> <p>Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language	Appendix A
		<p>Page 418 line 23 to page 419 line 15.</p>	<p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p>	
	<p>... for recording and subsequent transmission to a remote data collection site.</p>	<p>Page 411 line 28 to page 412 line 2.</p>	<p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in ...</p>	
		<p>Page 173 line 30 to page 174 line 23 from example #3.</p>	<p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3).")</p>	
		<p>Page 419 lines 4-15.</p>	<p>In the fashion described above, receiving said</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
			<p>third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...</p> <p>Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local apparatus receives programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing</p> <p>[Signal processor 200 in Fig. 7 and elsewhere] has capacity, at each station, for receiving monitor information that identifies what</p>
	<p>Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.</p> <p>FIG 5 illustrates methods for monitoring reception and operation which methods can be used to gather statistics on programming usage and associated uses of other data transmissions and equipment.</p>	<p>Page 28 lines 25-35.</p> <p>Page 397 lines 17-20.</p> <p>Page 312 line 33 to page 313 line 8.</p> <p>Page 28 lines 25-29.</p>	<p>Appendix A</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
					Appendix A
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming...	Page 327 line 35 to page 328 line 13.	<p>programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>...monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>...monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>
<p>Dependent Claim 211.</p> <p>The method of claim 210, wherein</p>	Column 11 lines 38-39.	By comparing identification signals on the incoming programming with the programming	Page 327 line 35 to page 328 line 13.		Computer, 73, monitors incoming programming by means of the aforementioned

Claim Language	References	Language	References	Language
				Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.
				Support to instant specification filed June 6, 1995.
				Appendix A
				<p>predetermined fashion source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.</p> <p>Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73.</p>
<p>Dependent Claim 212.</p> <p>The method of claim 211, wherein said portion of information includes code</p>				<p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <p>...unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data.</p>
<p>which is operative to control each of said receiver stations, said method further comprising the step of</p>	<p>Column 15 lines 58-60.</p> <p>Column 11 lines 38-43.</p>	<p>...are likely to be unique digital codes that may identify each programming or data unit received and the source of each.</p> <p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 49 lines 26-28.</p> <p>Page 50 lines 14-20.</p> <p>Page 327 line 35 to page 328 line 13.</p>	<p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <p>...unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
	<p>Column 19 lines 20-25.</p> <p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>
		<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) By contrast, the...</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so</p>

Appendix A

Claim Language	References	Language	References	Language
				<p>in inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13; ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
				Appendix A	
including said code in one of said at least one control signal and	Column 11 lines 38-39.		By comparing identification signals on the incoming programming...	<p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p> <p>Page 327 line 35 to page 328 line 13.</p>	<p>station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>...monitor information that identifies what programming is available,....</p>
				Page 84 lines 26-28.	
				Page 28 lines 26-27.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A

	<p>Column 19 lines 20-23.</p>	<p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 49 lines 26-27.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8-30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to...</p>
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Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Language	Language	Language
		Appendix A
said at least one of said designation signal.	<p>Column 11 lines 3-5.</p> <p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, ...</p>	<p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13;...</p> <p>Page 439 lines 14-15.</p> <p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station; automatically adds, in a predetermined fashion, source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, ...</p> <p>...microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control</p>
	<p>Column 19 lines 17-20.</p> <p>... processor or monitor, 12, ... reacts, ... by passing also externally to microcomputer, 205, all signals that it</p>	<p>Page 288 lines 16-20.</p>

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References		Language	Language
Appendix A			
	passes to buffer/ comparator, 14.	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25 from example #5.</p>	<p>information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p>
Dependent Claim 213.	<p>Column 11 lines 3-5.</p> <p>The method of claim 23, wherein one of said first of said receiver stations and said second of said receiver stations is</p>	<p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...</p> <p>Page 325 line 34 to page 326 line 7.</p>	<p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
	<p>Column 17 lines 62-64.</p> <p>Signal processor, 200, is always operating and monitors all incoming channels.</p>	<p>Appendix A</p> <p>distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addressed to ITS apparatus of said intermediate transmission station;....</p> <p>Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above;....</p>
<p>programmed to process one of said at least one control signal and said at least one designation signal</p>	<p>Column 9 lines 47-52.</p> <p>The controller, 20, is programed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.</p>	<p>Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
<p>based on one of a transmission location and time, said method further comprising the step of outputting said one of said at least one control signal and said designation signal in said one of a transmission location and time.</p>	<p>Column 4 lines 5-6.</p> <p>Column 9 lines 53-55.</p>	<p>These techniques employ signals embedded in programs.</p> <p>The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.</p>	<p>the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>The present invention employs signals embedded in programming.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	Appendix A A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Column 19 lines 43-44.	...instruction signals embedded in the "Wall Street Week" programming transmission.	Page 25 line 34 to page 26 line 1. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. Page 21 lines 23-24.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor instruction signals embedded in the "Wall Street Week" programming transmission.
	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35. Page 396 lines 8-10.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons. Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
Dependent Claim 214. The method of claim 213, wherein said one of said first of said receiver stations and said second of said receiver stations is programmed to process said one of said at least one control signal and said designation signal based				

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
				References	Appendix A
on one of an interval of time and	Column 9 lines 53-55.	The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.	Page 257 line 24 to page 258 line 19.	Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ... Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.	Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ... After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.
a predetermined time.	Column 11 lines 25-28.	Such input information might also indicate when and where the cable head end facility should expect to receive the programing.	Page 326 lines 33-35.	Such input information can indicate when and how the station should expect to receive each program unit,....	Determining a match causes microcomputer, 205, automatically to input said please-fully-
	Column 19 lines 8-9.	Microcomputer, 205, is preinformed of the time of cablecasting.	Page 437 lines 1-3.		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
Dependent Claim 215.				enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.
The method of claim 213, wherein said one of said first of said receiver stations and said second of said receiver stations is	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
programmed to process said one of said at least one control signal and	Column 11 lines 21-24.	Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code ...	Page 396 lines 8-10.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
	Column 19 lines 42-43.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to...	Page 326 lines 30-33.	Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information.
			Page 450 lines 31-32.	...caused his microcomputer, 205, to be preprogrammed as described above;....
			Page 21 lines 20-23.	Microcomputer, 205, is preprogrammed to ... respond ... to ...
said at least one designation signal	Column 9 lines 47-52.	The controller, 20, is programmed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.	Page 248 line 17 to page 249 line 5.	Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless

Claim Language	References	Language	References	Language
			Support to instant specification filed June 6, 1995.	

Appendix A

			<p>Page 257 line 24 to page 258 line 19.</p>	<p>channel 9, wireless channel 13, then to repeat said pattern.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p>
<p>based on a location in said information transmission.</p>	<p>Column 11 lines 38-39.</p>	<p>By comparing identification signals on the incoming programming...</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
		References	Language	References	Language
Appendix A					
				Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions
				Page 28 lines 26-27.	... monitor information that identifies what programming is available,....
				Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
		Column 19 lines 43-44.	...instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
Dependent Claim 216.					
The method of claim 215, further comprising the step of embedding said one of said at least one control signal and		Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
				Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
				Page 90 lines 4-7.	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
				Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	
		Column 4 lines 5-6.	These techniques employ signals	Page 13 lines 25-26.	The present invention employs signals

Claim Language	References	Language	References	Language
		<p>embedded in programs.</p> <p>By comparing identification signals on the incoming programming...</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Appendix A</p> <p>embedded in programming.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week"</p>
	<p>Column 11 lines 38-39.</p>		<p>Page 84 lines 26-28.</p>	
		<p>...instruction signals embedded in the "Wall Street Week" programming transmission.</p>	<p>Page 28 lines 26-27.</p>	
	<p>Column 19 lines 43-44.</p>		<p>Page 49 lines 26-27.</p>	
<p>said at least one designation signal in said information transmission.</p>	<p>Column 9 lines 55-57.</p>	<p>This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.</p>	<p>Page 21 lines 23-24.</p>	
			<p>Page 250 lines 13-17.</p>	

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		References	
Language		Language		Language	
				Appendix A	
		Column 7 lines 50-54.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both.	Page 251 lines 8-11. Page 263 lines 19-24.	program which is the message of the first combining synch command. Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.
					In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.
					Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both.
Dependent Claim 217. The method of claim 215, further comprising the step of embedding a portion of said one of said at least one control signal and said at least one designation signal in said location		Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
				Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
			in the programming transmission, and transmitted.	
			The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...	
			The present invention employs signals embedded in programming.	
			Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.	
			By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	
			SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....	
			Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	
			Page 13 lines 25-26.	
			Page 327 line 35 to page 328 line 13.	
			Page 84 lines 26-28.	
			These techniques employ signals embedded in programs.	
			By comparing identification signals on the incoming programming...	
			Column 4 lines 5-6.	
			Column 11 lines 38-39.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
			Page 28 lines 26-27.	... monitor information that identifies what programming is available,....
	Column 19 lines 43-44.	...instruction signals embedded in the "Wall Street Week" programing transmission.	Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
			Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
			Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
			Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			Page 24 lines 5-6.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...
			Page 451 lines 7-9.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...
a portion of said information transmission is	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
		References	Language	References	Language
Appendix A					
transmitted.			generated graphic is pictured.		over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
Dependent Claim 218.					
The method of claim 23, further comprising the step of: including in one of said information transmission a first portion of information which					
	Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion...		Page 30 lines 7-9.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.
enables one of said receiver stations to	Column 7 lines 37-39.	...that enables buffer/comparator, 8, among other things, to assemble signal units from signal words.		Page 36 line 32 to page 37 line 3. Page 37 lines 22 to page 38 line 10.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs Controller, 39, 44, or 47, is preprogrammed to receive units of signal information, to assemble said units into signal words that subscriber station apparatus can receive and process, and to transfer said words to said apparatus. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information,

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
		Appendix A
		by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions a subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. Said controller, 39, 44, or 47, has one or more output ports for communicating signal information to said apparatus.
	Page 156 line 33.	Fig. 3A shows one such preferred controller, 39.
	Page 157 lines 5-7.	Buffer, 39C, and processor, 39D, are the second buffer and processor and perform protocol conversion functions.
	Page 14 lines 22-25.	In all cases, signals may convey information in discrete words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction.
select one of a second portion of information and	If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.
a device to which to communicate a second portion of information.	If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
Dependent Claim 219.				
The method of claim 218, wherein said at least one control signal is addressed to a device in said at least one of said receiver stations, said method further comprising one of the group consisting of:	Column 7 lines 54-58.	If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 31 lines 14-18.	If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.
including said first portion of information	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
in said at least one designation signal; and	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, ...	Page 25 line 34 to page 26 line 1. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. Page 325 line 34 to page 326 line 10.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ... At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
	References	Language	References	Language	Appendix A
	<p>Column 17 lines 39-44.</p>	<p>Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming transmissions, identify and discriminate among one or more pieces of external equipment to which such signals are addressed, and transfer such signals to such equipment as directed.</p>	<p>Page 15 lines 16-23.</p>	<p>continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addressed to ITS apparatus of said intermediate transmission station; automatically adds, in a predetermined fashion, source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, ...</p> <p>The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ...</p> <p>... identifies the particular apparatus to which said signals are addressed, and outputs said signals to said apparatus ...</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ...</p> <p>Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205.</p>	<p>continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addressed to ITS apparatus of said intermediate transmission station; automatically adds, in a predetermined fashion, source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, ...</p> <p>The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ...</p> <p>... identifies the particular apparatus to which said signals are addressed, and outputs said signals to said apparatus ...</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ...</p> <p>Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205.</p>
<p>including said second portion of information</p>	<p>Column 19 lines 60-63.</p>	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.</p>	<p>Page 59 lines 29-33.</p>	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Support to instant specification filed June 6, 1995.
	References	Language	Language
<p>in said at least one control signal.</p>	<p>Column 4 lines 5-9.</p>	<p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 13 lines 25-28.</p>	<p>Appendix A</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.</p>
	<p>These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing, ...</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, ...</p>	<p>Page 25 line 33 to page 26 line 2..</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203, transferred to microcomputer, 205, and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art, to convert, as may be</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	References	Language
		Page 26 lines 4-8.	<p>required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p>
Dependent Claim 220.			
<p>The method of claim 219, wherein said device to which to communicate said second portion of information comprises a computer and</p>	<p>Column 11 lines 12-14.</p> <p>Column 19 lines 63-64.</p>	<p>Code reader, 72, passes the received signals, with channel identifiers, to cable program controller and computer, 73.</p> <p>This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p>	<p>Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73.</p> <p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders,</p>
<p>said second portion of information includes a first instruction to be communicated to said computer.</p>	<p>Column 11 lines 3-5.</p>	<p>Page 326 lines 16-18.</p> <p>Page 26 lines 1-2.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 325 line 34 to page 326 line 7.</p>	

Claim Language	References	Language	References	Language
				Support to instant specification filed June 6, 1995.
				<p>27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Then the host says, "And here is what your portfolio did." At this point, an instruction</p>
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming...	Page 327 line 35 to page 328 line 13.	
			Page 84 lines 26-28.	
			Page 28 lines 26-27.	
			Page 49 lines 26-27.	
	Column 19 lines 60-66.	At this point, an instruction signal is generated in the television studio	Page 25 line 33 to page 26 line 2..	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Language	Language	Language
	<p>originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, ...</p>	<p>Appendix A</p> <p>signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p>
<p>Dependent Claim 221.</p>		<p>Page 37 line 26 to page 38 line 8.</p> <p>Page 26 lines 4-8.</p>
<p>The method of claim 220, wherein signal content enables</p>	<p>Column 15 lines 57-62.</p> <p>The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of</p>	<p>Page 315 lines 20-24.</p> <p>Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	References	Language
	transmission.	<p>Page 44 lines 26-32.</p> <p>Page 49 line 26 to Page 50 line 4.</p> <p>Page 13 lines 25-32.</p> <p>Page 326 lines 11-15.</p>	<p>Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.</p> <p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <ul style="list-style-type: none"> ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ... <p>The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. They occur at precise times in programming and can synchronize the operation of receiver station apparatus to the timing of programming transmissions. They can be conveniently monitored.</p> <p>Signal processor system, 71, also has signal processor means to control signal processor system, 71, to record meter-monitor information of said message information, and to transfer recorded information to external communications network, 97.</p>
said one of said receiver stations to communicate to a remote station	<p>Column 4 lines 5-13.</p> <p>Column 11 lines 8-10.</p>	<p>These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing, that they can convey signals to equipment that must switch manners or modes of operation during transmissions of individual units of programming, and that they can be monitored.</p> <p>Signal processor, 71, also has means to record said signals and transfer them to external communications network, 97.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
	Column 12 lines 54-56.	Signal processors, 71 and 96, can transmit such records of programing to remote sites via telephone or other data transfer networks, 97 and 99 respectively.	Page 337 lines 19-21.	And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.
	Column 18 lines 29-41.	FIG. 6B also shows signal processor, 200, monitoring for a data gathering and ratings service.	Page 411 lines 10-11.	In addition, because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, ...
		TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...	Page 88 lines 19-22.	... monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen Company) that collect statistics on viewership and programming usage.
			Page 408 lines 18-29.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above escribed fashion.
			Page 414 lines 13-27.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44.
			Page 15 lines 16-22.	The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the

Appendix A

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References	Language
Appendix A			
		transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...	
		Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.	
		Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.	
		... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.	
		Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.	
		In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and	
		Page 36 lines 32-33.	
		Page 38 lines 11-14.	
		Page 411 lines 10-15.	
		Page 418 line 23 to page 419 line 15.	
		Page 411 line 28 to page 412 line 2.	
		The processors, 204 and 210, transfer this information to signal processor, 200, ...	
		... for recording and subsequent transmission to a remote data collection site.	

Claim Language	References	Language	References	Language
		<p>Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.</p>	<p>Page 173 line 30 to page 174 line 23 from example #3.</p> <p>Page 419 lines 4-15.</p> <p>Page 28 lines 25-35.</p>	<p>Appendix A</p> <p>causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in ...</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3).")</p> <p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
information evidencing one of (i) receipt of a portion of said information transmission and			Page 397 lines 17-20.	Appendix A Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...
	Column 11 lines 8-10.	Signal processor, 71, also has means to record said signals and transfer them to external communications network, 97.	Page 326 lines 11-15.	Signal processor system, 71, also has signal processor means to control signal processor system, 71, to record meter-monitor information of said message information, and to transfer recorded information to external communications network, 97.
	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
	Column 18 lines 38-41.	Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.	Page 28 lines 25-35.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
		Appendix A
(ii) a function performed in response to a portion of said information transmission, said method further comprising the step of	<p>Column 12 lines 54-56.</p> <p>Signal processors, 71 and 96, can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively.</p> <p>Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs.</p>	<p>records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...</p> <p>And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.</p> <p>Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
	Column 18 lines 30-37.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned,	Page 408 lines 18-29	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.
			Page 414 lines 13-27	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44.
			Page 15 lines 16-22	The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...
		The processors, 204 and 210, transfer this information to signal processor, 200, ...	Page 36 lines 32-33.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.
			Page 38 lines 11-14.	Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.
		Page 411 lines 10-15	... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor	

Claim Language	References	Language	References	Support to instant specification filed June 6, 1995.
			<p>Page 418 line 23 to page 419 line 15.</p> <p>Page 411 line 28 to page 412 line 2.</p> <p>Page 173 line 30 to page 174 line 23 from example #3.</p>	<p>information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to</p>

Appendix A

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References		Language	Language
Appendix A			
including said signal content in said information transmission.	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 419 lines 4-15. Page 28 lines 25-35. Page 327 line 35 to page 328 line 13.
			buffer/comparator, 14, is called, hereinafter, the "1 st monitor information (#13).") In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission. [Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
			Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Appendix A				
	Column 19 lines 14-15. ...pass all program and channel identifiers on all programing being cablecast on the multi-channel system.		Page 84 lines 26-28.	each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions
			Page 28 lines 26-27.	... monitor information that identifies what programming is available,....
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
			Page 435 lines 16-18.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C....
			Page 248 lines 22-26 from example #5.	Via a conventional multi-channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.
			Page 250 lines 13-16 from example #5.	Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...
			Page 252 lines 15-35 from example #5.	Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter-monitor segment

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language	
References	References	References	Language	
			Appendix A	
			<p>immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment) then meter-monitor segment information that includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...</p>	
		<p>Page 267 lines 20-28 from example #5.</p>	<p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p>	
	<p>Column 19 lines 60-63.</p>	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission</p>	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p>	
		<p>Page 25 line 34 to page 26 line 1.</p>	<p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
Dependent Claim 222. The method of claim 221, wherein said first portion of information controls said one of said receiver stations and said			Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	Appendix A The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
	Column 7 lines 36-37. Column 11 lines 38-43.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion... By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 30 lines 7-9. Page 36 line 32 to page 37 line 3. Page 327 line 35 to page 328 line 13.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion. Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs ... Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.

Claim Language	References	Language	References	Language
			<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 408 lines 31-34.</p> <p>Page 410 lines 10-11.</p> <p>Page 326 lines 11-15.</p> <p>Page 337 lines 19-21.</p> <p>Page 411 lines 10-11.</p> <p>Page 88 lines 19-22.</p>	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.</p> <p>Receiving said SPAM message causes said controller, 44, ... to ... tune radio, 209, to the frequency, ...</p> <p>Signal processor system, 71, also has signal processor means to control signal processor system, 71, to record meter-monitor information of said message information, and to transfer recorded information to external communications network, 97.</p> <p>And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.</p> <p>In addition, because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, ...</p> <p>... monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen</p>
<p>signal content is communicated to said remote station, said method further comprising one step from the group consisting of:</p>	<p>Column 18 lines 22-25.</p> <p>Column 11 lines 8-10.</p> <p>Column 12 lines 54-56.</p> <p>Column 18 lines 29-41.</p>	<p>Monitor or processor, 204, also identifies signals addressed to tuner, 213, which it transfers accordingly.</p> <p>These signals instruct tuner, 213, to tune radio, 209, to the proper frequency for the simulcast.</p> <p>Signal processor, 71, also has means to record said signals and transfer them to external communications network, 97.</p> <p>Signal processors, 71 and 96, can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively.</p> <p>FIG. 6B also shows signal processor, 200, monitoring for a data gathering and ratings service.</p>		<p>Appendix A</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
	Language	Language
Appendix A		
Company) that collect statistics on viewership and programming usage.		
Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ...		
Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.		
Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ...		
Said message is detected at said decoder, 210, and inputted to said controller, 44.		
The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...		
Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.		
Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A

			<p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p>	<p>Page 411 lines 10-15.</p>
			<p>... for recording and subsequent transmission to a remote data collection site.</p>	<p>Page 418 line 23 to page 419 line 15.</p> <p>Page 411 line 28 to page 412 line 2.</p>
			<p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information</p>	<p>Page 173 line 30 to page 174 line 23 from example #3.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	References	Language
References	References	References	References	Language
			<p>of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3).")</p> <p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...</p>	Appendix A
	<p>Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.</p>	<p>Page 419 lines 4-15.</p> <p>Page 28 lines 25-35.</p> <p>Page 397 lines 17-20.</p> <p>Page 315 lines 20-24.</p>	<p>Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.</p>	
including an identifier in said signal content;	Column 15 lines 57-62.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	References	Language
		Appendix A
		<p>Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.</p>
		<p>Meter-monitor segments contain meter information and/or monitor information. . . Examples of categories of such information include:</p> <ul style="list-style-type: none"> ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ...
	<p>Page 44 lines 26-32.</p>	<p>Page 49 line 26 to Page 50 line 4.</p>
	<p>By comparing identification signals on the incoming programming ...</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
	<p>Column 11 lines 38-39.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Language	Language	Language
		<p>Page 84 lines 26-28.</p>
<p>Column 19 lines 20-23.</p>	<p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25.</p>
		<p>Page 436 line 9 to page 437 line 3.</p>

Appendix A

SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....

...monitor information that identifies what programming is available, i...

Meter-monitor segments contain meter information and/or monitor information.

All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)

In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...

Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.

Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The

Claim Language	References	Language	References	Language	Appendix A
					<p>information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13;...</p>
including said signal content in said first portion of information;	Column 15 lines 57-62.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.	Page 439 lines 14-15.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.	<p>Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	References
References	Language	Language	Language
			<p>assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.</p> <p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <ul style="list-style-type: none"> ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ... <p>Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs ...</p> <p>Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs ...</p> <p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted</p>
including said first portion of information in said at least one control signal; and	<p>Column 7 lines 36-37.</p> <p>Column 11 lines 3-5.</p>	<p>Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion...</p> <p>Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion...</p> <p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...</p>	<p>Page 49 line 26 to Page 50 line 4.</p> <p>Page 30 lines 7-9.</p> <p>Page 36 line 32 to page 37 line 3.</p> <p>Page 30 lines 7-9.</p> <p>Page 36 line 32 to page 37 line 3.</p> <p>Page 325 line 34 to page 326 line 7.</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Language	Language	Language
	<p>Column 17 lines 39-41.</p> <p>Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming transmissions,...</p>	<p>Page 15 lines 16-23.</p> <p>The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information;</p>
<p>including said at least one designation signal in said at least one control signal.</p>	<p>Column 7 lines 50-54.</p> <p>Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both.</p> <p>Column 11 lines 3-5.</p> <p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, ...</p>	<p>Page 31 lines 10-14.</p> <p>Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both.</p> <p>Page 325 line 34 to page 326 line 10.</p> <p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station; automatically adds, in a predetermined fashion, source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, ...</p>
	<p>Column 17 lines 39- 44.</p> <p>Signal processor apparatus have the</p>	<p>Page 15 lines 16-23.</p> <p>The frequencies may convey television, radio,</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
	<p>ability to identify instruction and information signals in one or more inputted television and radio programming transmissions, identify and discriminate among one or more pieces of external equipment to which such signals are addressed, and transfer such signals to such equipment as directed.</p>	<p>or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ...</p> <p>... identifies the particular apparatus to which said signals are addressed, and outputs said signals to said apparatus ...</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ...</p> <p>Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205.</p>
<p>Dependent Claim 223.</p> <p>The method of claim 218, wherein said one of said receiver stations includes a computer and</p>	<p>Column 11 lines 15-17.</p> <p>Column 19 lines 42-43.</p> <p>Column 11 lines 21-31.</p>	<p>Page 34 lines 24-26.</p> <p>Page 44 lines 14-15.</p> <p>Page 95 lines 18-21.</p>
<p>a plurality of first instructions program said computer to</p>	<p>Cable program controller and computer, 73, is the central automatic control unit for the transmission station.</p> <p>Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to...</p> <p>Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code (which in the case of</p>	<p>Cable program controller and computer, 73, is the central automatic control unit for the transmission station.</p> <p>...caused his microcomputer, 205, to be preprogrammed as described above;...</p> <p>Microcomputer, 205, is preprogrammed to ... respond ... to ...</p> <p>Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information.</p>

Claim Language	References	Language	References	Language
Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.				
Support to instant specification filed June 6, 1995.				
Appendix A				
	<p>advertising might be a purchase order number).</p> <p>Such input information might also indicate when and where the cable head end facility should expect to receive the programing.</p> <p>Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.</p>	<p>Such input information can indicate when and how the station should expect to receive each program unit,....</p> <p>Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...</p>		
<p>Column 19 lines 45-53.</p>	<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>... several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.</p>	<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p>	<p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p>	<p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p>
	<p>These signals instruct microcomputer, 205, ...</p>	<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>	<p>Page 37 line 26 to page 38 line 8.</p>	<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>
	<p>Page 24 lines 5-16.</p>	<p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk</p>	<p>Page 24 lines 5-16.</p>	<p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Support to instant specification filed June 6, 1995:
References	Language	Language	Language
			<p>Appendix A</p> <p>drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."</p> <p>...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above</p>
	<p>... to generate several graphic video overlays, ...</p> <p>... which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to ...</p> <p>... transmit these overlays to TV set, 202, ...</p> <p>... upon command.</p>	<p>Page 451 lines 7-11.</p> <p>Page 19 line 29 to page 20 line 20.</p> <p>Page 26 lines 4-8.</p> <p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Support to instant specification filed June 6, 1995.	Language
	References	Language	References	Language
<p>respond to a second instruction, said method further comprising one step from the group consisting of:</p>	<p>Column 11 lines 38-43.</p> <p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 327 line 35 to page 328 line 13.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter</p>	<p>signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p>	<p>Appendix A</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.		<p>information and/or monitor information.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing</p>	Appendix A
			Page 23 line 35 to page 24 line 16.		
			Page 44 lines 14-17.		
			Page 26 lines 20-28.		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A

transmitting said plurality of first instructions; and				loading and running information for a particular combining.)
	Column 11 lines 39-41.	... the programing schedule received earlier from local input, 74, and/or from a remote site via network, 98, ...	Page 328 lines 9-10.	... with information of the programming schedule, received earlier from input, 74, and/or network, 98, ...
	Column 19 lines 62-63	... and is transmitted in the programing transmission.	Page 326 lines 28-30.	... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.
	Column 19 lines 43-53.	... instruction signals embedded in the "Wall Street Week" programing transmission.	Page 25 line 35 to page 26 line 1.	... embedded in the programming transmission, and transmitted.
		When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
		... several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
			Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
			Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
		These signals instruct microcomputer, 205, ...	Page 24 lines 5-16.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Appendix A	Language	Language
		<p>decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."</p> <p>...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Microcomputer, 205, is a conventional microcomputer system ... for generating a computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal</p>
	<p>... to generate several graphic video overlays, ...</p> <p>... which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to ...</p> <p>... transmit these overlays to TV set, 202, ...</p> <p>... upon command.</p>	<p>Page 451 lines 7-11.</p> <p>Page 19 line 29 to page 20 line 20.</p> <p>Page 26 lines 4-8.</p> <p>Page 44 lines 14-17.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	References	Language
				Appendix A		
				information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.	Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
transmitting said second instruction.	transmitting said second instruction.	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.	Page 59 lines 29-33.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
				The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...	Page 25 line 34 to page 26 line 1. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
	By comparing identification signals on the incoming programming ...	Column 11 lines 38-39.		Computer, 73, monitors incoming programming by means of the aforementioned	Page 327 line 35 to page 328 line 13.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	References	References	Language
			<p>dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39,</p>
		<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>Appendix A</p>
	<p>Column 19 line 60 to column 20 line 1.</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p>		

Claim Language	References	Language	References	Language	Appendix A
					44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			Page 26 lines 4-11.		Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...
Dependent Claim 224.					Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system; 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule
The method of claim 23, wherein said at least one control signal is for controlling said first of said receiver stations to transmit said information transmission to said second of said receiver stations to	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.		
		This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.			
		The viewer then sees a microcomputer generated graphic of his own stocks' performance ...			

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	
References	References	References	Language
			<p>received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>...caused his microcomputer, 205, to be preprogrammed as described above; ...</p>
	<p>Column 11 lines 50-57.</p> <p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>Appendix A</p>
control said second of said receiver stations.	Column 19 lines 42-49.	Page 450 lines 31-32.	

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
		References	Language	References	Language
			instruction signals embedded in the "Wall Street Week" programing transmission.	Page 21 lines 20-24.	Microcomputer, 205, is preprogrammed to ... respond ... to instruction signals embedded in the "Wall Street Week" programming transmission.
			When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...	Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
			... several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			These signals instruct microcomputer, 205, ...	Page 24 lines 5-6.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...

Appendix A

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490, filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		Language	
Appendix A					
Dependent Claim 225.	The method of claim 2, wherein said step of logging includes constructing a record.	Column 12 lines 50-53.	Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs.	Page 337 lines 12-19.	By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.
Dependent Claim 226.	The method of claim 225, wherein said identifier identifies one of a plurality of channels and	Column 11 lines 6-7.	...pass them, along with information identifying the channel source of each signal, externally to code reader, 72.	Page 326 lines 7-11.	...adds, ... source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.
	a record is constructed for each of said plurality of channels.	Column 11 lines 32-37.	By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75.	Page 328 lines 2-7.	By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.
		Column 12 lines 50-53.	Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs.	Page 337 lines 12-19.	By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.
Dependent Claim 227.	The method of claim 225, further	Column 12 lines 54-56.	Signal processors, 71 and 96, can transmit such records of programming to remote	Page 337 lines 19-21.	And said signal processor apparatus can transmit such records of programming to

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
comprising the step of transmitting said record to a remote site.		sites via telephone or other data transfer networks, 97 and 99 respectively.	remote sites via telephone or other data transfer networks, 97 and 99, respectively.
Dependent Claim 228. The method of claim 26, wherein said signal is contained in a television programming transmission.	Column 12 lines 57-58.	This particular embodiment describes a transmission facility transmitting only television programming.	So far this disclosure has described an intermediate transmission station that transmits conventional television programming...
Dependent Claim 229. The method of claim 26, wherein said signal includes an identifier.	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message informing with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ...monitor information that identifies what programming is available....

Appendix A

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		Language	
Appendix A					
				Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
Dependent Claim 230. The method of claim 229, wherein said network	Column 20 lines 59-62.	(An alternate method for transmitting the recipe to printer, 221, would be for the recipe, itself, to be located in encoded digital form in the programming transmission recieved by TV set, 202.		Page 476 line 34 to Page 477 line 3, Page 473 lines 3-13.	(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe-and-shopping-list instructions.... The program originating studio ... transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India." ... At the station of Fig. 7 and 7F ... , apparatus is caused to receive ... said program ... at a tuner, 215, and ... monitor, 202M; ...
transmits one of	Column 20 lines 54-56.	... when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,...		Page 28 lines 25-35.	[Signal processor in Fig.7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferrring said meter records automatically to one or more remote

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	References	Language
	References	Language	References	Language
said signal and	Column 20 line 49-52.	Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16.	Page 473 line 29 to page 474 line 1	<p>automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p> <p>At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.</p>
said identifier	Column 20 lines 53-54.	This signal indicates that the recipe, itself, has been received.	Page 473 line 29 to page 474 line 1	<p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p>
	Column 15 lines 57-60.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each.	Page 315 lines 20-24.	<p>Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

via telephone network.			<p>Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.</p> <p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <ul style="list-style-type: none"> ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. <p>[Signal processor in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...</p>
			<p>Page 44 lines 26-32.</p>
			<p>Page 49 line 26 to page 50 line 20.</p>
			<p>Page 28 lines 25-35.</p>
		... when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site, ...	
	Column 20 lines 54-58.		
		... that site can determine for billing purposes that the recipe was, ...	
			<p>Page 44 lines 26-30.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Language	Language	Language
Appendix A		
		<p>Page 471 lines 26-31.</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,....</p> <p>Page 473 lines 3-8.</p> <p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...</p> <p>Page 472 lines 23-27 with</p> <p>Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.</p> <p>Page 471 lines 14-16.</p> <p>Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...</p> <p>Page 473 line 29 to Page 474 line 1.</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p>
Dependent Claim 231.		
The method of claim 26, wherein said step of comparing is performed at said transmitter station.	<p>Column 11 lines 38-43.</p> <p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine</p>	<p>Page 327 line 35 to page 328 line 13.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information,</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	References
Language	Language	Language	Language
		<p>when and on what channel or channels the head end facility should transmit the programming.</p>	<p>received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>
<p>Dependent Claim 232.</p> <p>The method of claim 26, wherein one of said step of comparing and said step of determining is performed</p>	<p>Column 11 lines 38-43.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490, filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
	References		Language	References	Language
Appendix A					
at said receiver station.			received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.		
			SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....	Page 84 lines 26-28.	
			... monitor information that identifies what programming is available, ...	Page 28 lines 26-27.	
			Meter-monitor segments contain meter information and/or monitor information.	Page 49 lines 26-27.	
	Column 10 lines 30-39.		The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.	Page 324 lines 23-31.	
	Column 19 lines 60-63.		A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.	Page 59 lines 29-33.	
			At this point, an instruction signal is generated	Page 25 line 34 to page	

Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
Claim Language	References	References	Language
			Appendix A
		26 line 1. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	at said program originating studio, embedded in the programming transmission, and transmitted. The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
Dependent Claim 233. The method of claim 26, wherein said step of determining includes determining one of a channel and a frequency.	Column 11 lines 41-43.		...computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming ...
Dependent Claim 234. The method of claim 26, wherein said step of determining includes determining a portion of a broadband information transmission.	Column 11 lines 41-43. Column 10 lines 24-28.		...computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming ... Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
Dependent Claim 235. The method of claim 26, wherein said	Column 11 lines 50-54.	Page 328 lines 22-31.	For example, computer, 73, receives a given SPAM message that contains given "program

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language

Appendix A

step of determining includes (i) determining a location from which said signal is transmitted or	receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, ...	unit identification code" information. ... Receiving said message causes computer, 73, to determine ... that said "code" information matches ... schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87.
(ii) determining a location to which said signal is to be transmitted.	...controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	...computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming ...
Dependent Claim 236.		
The method of claim 31, further comprising the step of storing said selected portion of said signal.	Column 11 lines 41-43.	Page 328 lines 11-13.
	Column 16 lines 51-54.	Page 315 lines 6-10.
	Signal processor, 130, would probably receive these signals from decoders, 131, 136, 138, 143, 145, 147, 149, and 150) at its buffer/comparator unit, 14 (referring to FIG. 1),...	Fig. 5 shows each decoder as having capacity for transferring monitor information to signal processor, 200, by bus communications means. Said information is received (and processed) at signal processor, 200, by the onboard controller, 14A, (In circumstances where information collecting and processing functions are extensive--for example, when a given buffer/comparator, 14, must collect monitor information at a subscriber station with apparatus and/or communications flows that are extensive and complex--buffer/comparator, 14, may operate under control of a dedicated, so-called "on-board" controller, 14A, at buffer/comparator, 14, which is preprogrammed with appropriate control instructions and is controlled by controller, 20, similarly to the fashion in which controller, 12 is controlled by controller, 20.)
Dependent Claim 237.		

Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
Claim Language	Language
References	References

Appendix A	
The method of claim 31, wherein said selected portion of said signal includes said first identifier.	<p>Column 15 lines 57-60.</p> <p>The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each.</p>
	<p>Page 315 lines 20-24.</p> <p>Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.</p>
	<p>Page 44 lines 26-32.</p> <p>Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.</p>
	<p>Page 49 line 26 to page 50 line 20.</p> <p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <ul style="list-style-type: none"> ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data.
Dependent Claim 238.	
The method of claim 31, further comprising the step of tuning to receive programming contained in said signal	<p>Column 19 lines 23-25.</p> <p>... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...</p>
	<p>Page 437 lines 1-6.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p>
	<p>Page 439 lines 9-15.</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490, filed November 3, 1981.	Support to instant specification filed June 6, 1995.
Language	Language	Language

Appendix A

based on one of said first identifier and said step of selecting.			Page 295 lines 6-8.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...
			Page 439 lines 9-15.	...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
	Column 19 lines 17-23.	... processor or monitor, 12, ... reacts, ... by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-18.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...
			Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
			Page 435 lines 16-25.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ... Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.
			Page 436 line 9 to page 437 line 3.	Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to

Appendix A

				<p>the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-oh-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p>
			Page 439 lines 14-15.	
			Page 314 lines 31-33.	At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.
			Page 315 lines 14-19.	In the preferred embodiment, each one of said decoders is located at a point in the circuitry
Dependent Claim 239. The method of claim 36, further comprising the step of tuning to receive said programming.	Column 15 lines 44-49.	Each decoder is likely to be located physically inside its associated player/recorder unit. Each is located at a point in the associated unit's circuitry where it receives every embedded signal on the programming channel or data channel to which the unit is tuned ...		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
			Appendix A
Dependent Claim 240. The method of claim 239, further comprising the step inputting said programming to a computer.	Column 15 lines 52-56.	If a unit like the microcomputer can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have sufficient apparatus to monitor every channel and kind of transmission it can receive.	of its associated apparatus where said one receives (so as to detect all SPAM information on) the information of the selected frequency, channel or transmission to which its associated apparatus is tuned.
Dependent Claim 240. The method of claim 239, further comprising the step inputting said programming to a computer.	Column 19 lines 43-49.	... instruction signals embedded in the "Wall Street Week" programming transmission. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	If a given intermediate or output apparatus can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have sufficient apparatus to monitor every channel and kind of transmission it can receive.
	Page 21 lines 23-24. Page 451 lines 6-7. Page 23 line 35 to page 24 line 4. Page 37 line 26 to page 38 line 8.	... instruction signals embedded in the "Wall Street Week" programming transmission. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ... Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	... instruction signals embedded in the "Wall Street Week" programming transmission. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ... Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	Language
				Appendix A	
Dependent Claim 241. The method of claim 41, further comprising the step of selecting one of said plurality of signals		These signals instruct microcomputer, 205, ...	Page 24 lines 5-6.	Microcomputer, 205, evaluates the initial, signal word or words which instruct it to ...	
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.	
	Column 11 lines 57-65.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 329 line 2-22.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
		Appendix A
according to said schedule.	Column 11 lines 38-43.	<p>upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what</p>
	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	<p>Page 327 line 35 to page 328 line 13.</p> <p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
			Page 49 lines 26-27.	programming is available, ... Meter-monitor segments contain meter information and/or monitor information.
Dependent Claim 242. The method of claim 41, further comprising the step of responding to said signal.	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13. Page 84 lines 26-28. Page 28 lines 26-27. Page 49 lines 26-27.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information.
Dependent Claim 243. The method of	Column 11 lines 41-43.	...controller/computer, 73, can determine	Page 328 lines 11-13.	...computer, 73, can determine, in a

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		References	
Language		Language		Language	
claim 242, wherein said step of responding to said signal is performed at said transmission station.	Column 10 lines 24-28.	when and on what channel or channels the head end facility should transmit the programming.	FIGS. 3A, 3B and 3C illustrates one instance of such use. Figure 3 illustrates the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.	Page 324 lines 18-21.	predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming ... Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
Dependent Claim 244. The method of claim 41, wherein said step of outputting is performed at said transmission station.	Column 11 lines 8-10.	Signal processor, 71, also has means to record said signals and transfer them to external communications network, 97.		Page 326 lines 11-15.	Signal processor system, 71, also has signal processor means to control signal processor system, 71, to record meter-monitor information of said message information, and to transfer recorded information to external communications network, 97.
Dependent Claim 245. The method of claim 41, wherein said step of outputting is performed at a receiver station.	Column 12 lines 54-56. Column 12 lines 45-47.	Signal processors, 71 and 96, can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively. Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96,		Page 337 lines 19-21. Page 337 lines 1-8.	And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively. Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96,
Dependent Claim 246. The method of claim 245, wherein said	Column 12 lines 45-47.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits		Page 337 lines 1-8.	Fig. 6 shows particular signal processor system monitoring apparatus associated with

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	References
References	Language	Language	Language
<p>receiver station receives said signal from said transmission station.</p>		<p>programming to signal processor, 71, and signal processor, 96,</p>	<p>the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96,</p>
<p>Dependent Claim 247.</p> <p>The method of claim 41, further comprising the step of communicating said signal to an addressed device.</p>	<p>Column 11 lines 3-5.</p>	<p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, ...</p>	<p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station; automatically adds, in a predetermined fashion, source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, ...</p> <p>If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.</p>
<p>Dependent Claim 248.</p> <p>The method of</p>	<p>Column 7 lines 54-58.</p>	<p>If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.</p>	<p>Page 325 line 34 to page 326 line 10.</p> <p>Page 31 lines 14-18.</p> <p>If a signal or signals are to be transferred</p>

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		References	
claim 247, wherein said step of communicating is based on		externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.		externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.	
said step of identifying.		Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...	Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....
Dependent Claim 249.					
The method of claim 46, further comprising selecting one of said plurality of signals		Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
	<p>Column 11 lines 57-65.</p>	<p>Appendix A</p>
<p>according to said schedule.</p>	<p>Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.</p>	<p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.</p>
	<p>Column 11 lines 38-43.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p>
	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>By comparing selected meter-monitor information of said message information with</p>
	<p>Page 329 line 2-22.</p>	<p>Page 327 line 35 to page 328 line 13.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	References
References	Language	Language	Language
			<p>Appendix A</p> <p>information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>
Dependent Claim 250.			
The method of claim 64, further comprising the steps of:			
selecting a storage location,	Column 11 lines 60-61.	... controller/ computer, 73, selects a video recorder/player, 76 or 78, ...	Page 84 lines 26-28.
and storing said signal at said storage location.	Column 11 lines 64-65.	... and instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 28 lines 26-27.
Dependent Claim 251.			Page 49 lines 26-27.
The method of claim 64, wherein said signal is one of a plurality of signals.	Column 11 lines 21-24.	Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code ...	So determining causes computer, 73, ... to select a video recorder/player, 76 or 78; ...
Dependent Claim 252.			... to cause said selected recorder, 76 or 78, to turn on and record programming, ...
The method of claim 251, further	Column 11 line 67 to Column 12 line 8.	If controller/ computer, 73, determines at any time that it is necessary ...	Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information.
			Computer, 73, has capacity for automatically organizing the locations of units

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
comprising the step of reordering said plurality of signals.		<p>... to reorganize the order in which programming units are stored on either recorder/player or on both, ...</p> <p>... controller/computer, 73, can use techniques for reorganizing files stored on multidisk units, which techniques are well known to computer operators, and order the execution of such techniques by passing appropriate instructions to of matrix switch, 75, and recorder/ players, 76 and 78.</p>	<p>of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. ... Caused to organize the locations of said units to play according to said schedule, computer 73, ...</p> <p>Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. For example, four spot commercials--program units Q, Y, W, and D--are loaded on 76 and 78. D and Q are recorded on the video tape loaded on recorder, 76, with D first. W and Y are recorded on the tape on recorder, 78, with W first.</p> <p>In this fashion, computer, 73, causes units Y and W to be located on different recorders because said units are scheduled to be transmitted simultaneously and units Y then D to be located in sequence on the same recorder because unit D is scheduled to play on the same channel immediately after Y.</p> <p><i>See generally.</i></p> <p>Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. For example, four spot commercials--program units Q, Y, W, and D--are loaded on 76 and 78. D and Q are recorded on the video tape loaded on recorder, 76, with D first. W and Y are recorded on the tape on recorder, 78, with W</p>

Claim Language	References	Language	References	Language
Appendix A				
		<p>first. According to the schedule recorded at computer, 73, Q should play first on the cable channel modulated by cable channel modulator, 83; then subsequently Y and W should start to play simultaneously on the channels modulated by modulators, 83 and 87 respectively; then D should play on the channel modulated by modulator, 83, immediately after Y ends. Caused to organize the locations of said units to play according to said schedule, computer 73, ...</p> <p>Determining said located space to be available causes computer, 73, to cause recorder, 76, to move forward or rewind to the start of program unit D; to cause recorder, 78, to rewind to the start of said located space; and to cause switch, 75, to configure its switches so as to transfer the output of recorder, 76, to the input of recorder, 78. Automatically, computer, 73, then causes recorder, 76, to play and recorder, 78, to record for the duration of program unit D. ...</p> <p>Computer, 73, causes recorder, 78, to move forward or rewind to the start of program unit Y; causes recorder, 76, to rewind to the start of the available space; and causes switch, 75, to configure its switches so as to transfer the output of recorder, 78, to the input of recorder, 76. Computer, 73, causes recorder, 78, to play and recorder, 76, to record for the duration of program unit Y. ...</p> <p>In this fashion, computer, 73, causes units Y and W to be located on different recorders because said units are scheduled to be transmitted simultaneously and units Y then D to be located in sequence on the same recorder because unit D is scheduled to play on the same channel immediately after Y.</p>	<p>For example, page 332 lines 23-31.</p> <p>For example, page 333 lines 15-21.</p> <p>For example, page 334 lines 1-6.</p>	
Dependent				

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		References	
Language		Language		Language	
Appendix A					
Claim 253. The method of claim 65, wherein said plurality of signals include audio programming and data programming.	Column 12 lines 58-61.	The facility could also process and transmit radio programming and other electronic data according to the methods described here ...	Page 339 lines 11-23.	... however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...	
Dependent Claim 254. The method of claim 65, wherein said one signal includes one of audio programming and data programming.	Column 12 lines 58-61.	The facility could also process and transmit radio programming and other electronic data according to the methods described here ...	Page 339 lines 11-23.	... however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...	
Dependent Claim 255. The method of claim 65, wherein said plurality of signals include video programming and audio programming for simultaneous output to a viewer and said one signal includes audio programming.	Column 12 lines 57-58.	This particular embodiment describes a transmission facility transmitting only television programming.	Page 339 lines 9-11.	So far this disclosure has described an intermediate transmission station that transmits conventional television programming....	
Dependent Claim 256. The method of claim 70, wherein said signal is one of a plurality of signals.	Column 11 lines 21-24.	Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique	Page 326 lines 30-33.	Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program	

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		References	
Language		Language		Language	
Appendix A		unit identification code" information.		unit identification code" information.	
Dependent Claim 257. The method of claim 256, further comprising the step of storing said plurality of signals in an order.		program code ...			
	Column 11 lines 64-65. Column 12 lines 1-3:	... and instructs the recorder/player, 76 or 78, to turn on and record the programming. ... to reorganize the order in which programming units are stored on either recorder/player or on both, ...	Page 329 line 15-16. Page 331 lines 16-25.	... to cause said selected recorder, 76 or 78, to turn on and record programming, ... Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. For example, four spot commercials--program units Q, Y, W, and D—are loaded on 76 and 78. D and Q are recorded on the video tape loaded on recorder, 76, with D first. W and Y are recorded on the tape on recorder, 78, with W first. In this fashion, computer, 73, causes units Y and W to be located on different recorders because said units are scheduled to be transmitted simultaneously and units Y then D to be located in sequence on the same recorder because unit D is scheduled to play on the same channel immediately after Y.	
Dependent Claim 258. The method of claim 256, further comprising the step of reordering said plurality of signals.					
	Column 11 line 67 to Column 12 line 8.	If controller/ computer, 73, determines at any time that it is necessary to reorganize the order in which programming units are stored on either recorder/player or on both, ...	Page 331 lines 17-33. Page 331 lines 16-25.	Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. ... Caused to organize the locations of said units to play according to said schedule, computer 73, ... Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording	

Claim Language	References	Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.
						Appendix A
						<p>media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. For example, four spot commercials--program units Q, Y, W, and D—are loaded on 76 and 78. D and Q are recorded on the video tape loaded on recorder, 76, with D first. W and Y are recorded on the tape on recorder, 78, with W first.</p> <p>In this fashion, computer, 73, causes units Y and W to be located on different recorders because said units are scheduled to be transmitted simultaneously and units Y then D to be located in sequence on the same recorder because unit D is scheduled to play on the same channel immediately after Y.</p> <p><i>See generally.</i></p> <p>Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. For example, four spot commercials--program units Q, Y, W, and D—are loaded on 76 and 78. D and Q are recorded on the video tape loaded on recorder, 76, with D first. W and Y are recorded on the tape on recorder, 78, with W first. According to the schedule recorded at computer, 73, Q should play first on the cable channel modulated by cable channel modulator, 83; then subsequently Y and W should start to play simultaneously on the channels modulated by modulators, 83 and 87 respectively; then D should play on the channel modulated by modulator, 83, immediately after Y ends. Caused to organize the locations of said units to play according to</p>
			<p>... controller/computer, 73, can use techniques for reorganizing files stored on multidisk units, which techniques are well known to computer operators, and order the execution of such techniques by passing appropriate instructions to of matrix switch, 75, and recorder/ players, 76 and 78.</p>	<p>Page 334 lines 1-6.</p> <p>Page 331 line 17 to page 334 line 6</p> <p>For example, page 331 lines 17-33.</p>		

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	References	References	Language
		<p>For example, page 332 lines 23-31.</p> <p>For example, page 333 lines 15-21.</p> <p>For example, page 334 lines 1-6.</p>	<p>Appendix A</p> <p>said schedule, computer 73, ...</p> <p>Determining said located space to be available causes computer, 73, to cause recorder, 76, to move forward or rewind to the start of program unit D; to cause recorder, 78, to rewind to the start of said located space; and to cause switch, 75, to configure its switches so as to transfer the output of recorder, 76, to the input of recorder, 78. Automatically, computer, 73, then causes recorder, 76, to play and recorder, 78, to record for the duration of program unit D. ...</p> <p>Computer, 73, causes recorder, 78, to move forward or rewind to the start of program unit Y; causes recorder, 76, to rewind to the start of the available space; and causes switch, 75, to configure its switches so as to transfer the output of recorder, 78, to the input of recorder, 76. Computer, 73, causes recorder, 78, to play and recorder, 76, to record for the duration of program unit Y. ...</p> <p>In this fashion, computer, 73, causes units Y and W to be located on different recorders because said units are scheduled to be transmitted simultaneously and units Y then D to be located in sequence on the same recorder because unit D is scheduled to play on the same channel immediately after Y.</p>
<p>Dependent Claim 259.</p> <p>The method of claim 75, wherein said processor is located at a receiver station remote from</p>	<p>Column 12 lines 45-47.</p> <p>Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96,</p>	<p>Page 337 lines 1-8.</p>	<p>Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	References	Appendix A
References	Language	Language	References	Language
said transmission station.	Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrates one instance of such use. Figure 3 illustrates the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.	Page 324 lines 18-21.	processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
Dependent Claim 260. The method of claim 80, wherein said selected information is detected	Column 18 lines 59-62.	When it identifies a signal of interest, it relays that information and the channel identifier, in this illustration, to microcomputer, 205.	Page 422 line 33 to Page 423 line 10.	...cause said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information ... Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5.
in said comparison signal.	Column 18 lines 52-55.	The news services precede each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.	Page 420 line 32 to page 421 line 17.	Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit-News-Item SPAM message ... In due course, said remote news-service-A station transmits a particular AT&T news item in a particular Transmit-AT&T-News-Item message that is in said Transmit-News-Item SPAM message format and that consists of ... the "program unit identification code" information of said AT&T news item and subject matter information of said binary

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
				Appendix A
Dependent Claim 261. The method of claim 80, wherein said comparison signal includes a plurality of identifiers.	Column 15 lines 58-60.	...are likely to be unique digital codes that may identify each programming or data unit received and the source of each.	Page 49 lines 26-28. Page 50 lines 14-20.	information of "T", appropriate padding bits, an information segment that contains said AT&T news item, and an end of file signal. Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ...unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data.
Dependent Claim 262. The method of claim 80, wherein said receiver station includes a plurality of receivers.	Column 18 lines 43-45.	Figure 6C illustrates methods for monitoring multiple programming channels and selecting programming and information in a predetermined fashion.	Page 419 line 34 to Page 420 line 2.	Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.
Dependent Claim 263. The method of claim 262, further comprising the steps of: receiving said selected information at a first of said plurality of receivers, and receiving said portion of said information a transmission at a second of said plurality of receivers.	Column 18 lines 58-59. Column 18 lines 65-67.	Signal processor, 200, scans sequentially all channels. ...and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing	Page 422 lines 23-25. Page 426 lines 10-18.	At the station of Fig. 7 and 7C, signal processor, 200, scans sequentially all channels at its switch, 1, mixer, 3, and decoder, 30, in the fashion of example #5. Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		Language	
Appendix A					
Dependent Claim 264.					news item.)
The method of claim 80, wherein said step of receiving includes actuating a receiver.	Column 18 lines 62-65.	In a predetermined fashion, either microcomputer, 205, or signal processor, 200, instructs tuner, 223, to set cable converter box, 222, to the proper channel,...	Page 423 lines 11-13. Page 424 lines 2-9.	Receiving said message causes said controller, 20, to cause a selected cable converter box, 222, to receive the transmission identified by said channel mark; Then receiving a particular to-223 instruction from said control processor, 20A, causes controller, 20, to transmits particular instructions, via said control information transmission link, to said tuner, 223, thereby causing said tuner, 223, to tune its associated cable converter box, 222, the to the particular channel transmission of said multi-channel cable transmission that is identified by said channel mark.	
Dependent Claim 265.					
The method of claim 80, wherein said step of receiving includes controlling a tuner.	Column 18 lines 62-65.	In a predetermined fashion, either microcomputer, 205, or signal processor, 200, instructs tuner, 223, to set cable converter box, 222, to the proper channel,...	Page 423 lines 11-13. Page 424 lines 2-9.	Receiving said message causes said controller, 20, to cause a selected cable converter box, 222, to receive the transmission identified by said channel mark; Then receiving a particular to-223 instruction from said control processor, 20A, causes controller, 20, to transmits particular instructions, via said control information transmission link, to said tuner, 223, thereby causing said tuner, 223, to tune its associated cable converter box, 222, the to the particular channel transmission of said multi-channel cable transmission that is identified by said channel mark.	
Dependent Claim 266.					
The method of claim 80, wherein said step of receiving	Column 18 lines 65-67.	...and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing	Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer,	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
includes controlling a storage device.		Appendix A
Dependent Claim 267.		221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
The method of claim 80, wherein said selected information is detected in said information transmission.	<p>Signal processor, 200, scans sequentially all channels.</p> <p>The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.</p>	<p>At the station of Fig. 7 and 7C, signal processor, 200, scans sequentially all channels at its switch, 1, mixer, 3, and decoder, 30, in the fashion of example #5.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder,</p>
	<p>Column 18 lines 58-59.</p> <p>Column 9 lines 53-57.</p>	<p>Page 422 lines 23-25.</p> <p>Page 257 line 24 to page 258 line 19.</p> <p>Page 265 line 27 to Page 266 line 21.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
Appendix A		
	This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.	<p>40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synch command.</p> <p>Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...</p> <p>... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.</p>
		<p>Page 250 lines 13-17.</p> <p>Page 251 lines 8-11.</p> <p>Page 263 lines 19-24.</p> <p>Page 37 lines 26-28.</p>
Dependent Claim 268.	Column 11 lines 38-39.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information,

Claim Language	References	Language	References	Language
				<p>received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>...monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>
Dependent Claim 269.				
The method of claim 80, wherein said programming signal includes said comparison signal.	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	References	References	Language
		<p>with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>	
		<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p>	
Dependent Claim 270.			
<p>The method of claim 85, wherein said step of causing includes one of selecting a frequency and</p>	<p>Signal processor, 200, scans sequentially all channels.</p> <p>The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.</p>	<p>At the station of Fig. 7 and 7C, signal processor, 200, scans sequentially all channels at its switch, 1, mixer, 3, and decoder, 30, in the fashion of example #5.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30,</p>	<p>Page 422 lines 23-25.</p> <p>Page 257 line 24 to page 258 line 19.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
Appendix A		
tuning a receiver.	Column 18 lines 59-62.	<p>controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>... cause said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information ...</p> <p>Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5.</p>
Dependent Claim 271.	Column 18 lines 59-62.	<p>Page 265 line 27 to Page 266 line 21.</p> <p>Page 422 line 33 to Page 423 line 10.</p>
The method of claim 85, wherein said step of causing includes	Column 18 lines 59-62.	<p>... cause said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and</p>

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		References	
Language		Language		Language	
identifying said one of said plurality of signals.		microcomputer, 205.			determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information ... Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5.
Dependent Claim 272. The method of claim 88, further comprising the step of programming said computer to respond to at least one control signal embedded in a television signal.	Column 11 lines 21-31.	Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code (which in the case of advertising might be a purchase order number). Such input information might also indicate when and where the cable head end facility should expect to receive the programming. Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 30 to page 327 line 2.		Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information. Such input information can indicate when and how the station should expect to receive each program unit, ... Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...
	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.		Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
Appendix A		
		information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
		SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
		... monitor information that identifies what programming is available, ...
		Meter-monitor segments contain meter information and/or monitor information.
Dependent Claim 272. The method of claim 88, further comprising the step of programming said computer to respond to at least one control signal embedded in a television signal.	Column 19 lines 42-44.	Page 21 lines 20-24. Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.
Dependent Claim 273. The method of claim 88, further comprising the step of programming said transmission station to detect at least one control signal embedded in a	Column 11 lines 3-5.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68,

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language
television signal.	Column 5 lines 16-20.	It has a read only memory for recording permanent operating instructions and other information and a programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions.	Page 16 lines 6-10.	69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station; ... It has a read only memory for recording permanent operating instructions and other information and a programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions.
Dependent Claim 274. The method of claim 93, wherein said user response is inputted by a computer.	Column 19 lines 42-44. Column 19 lines 67 to column 20 line 2.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 21 lines 20-24. Page 451 line 3. Page 26 lines 8-11.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission. And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
Dependent Claim 275. The method of claim 93, wherein said user response is inputted by a viewer.	Column 20 lines 19-26.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input." The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, to hold and process further ...	Page 471 lines 6-25.	Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F; ... --enters TV567#, in a fashion well known

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Language	Language	Language
		Appendix A
		<p>in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.</p> <p>Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.</p>
<p>Dependent Claim 276.</p> <p>The method of claim 93, further comprising the step selecting one of said plurality of signals based on said user response.</p>		<p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said</p>
		<p>Page 471 line 26 to page 472 line 17.</p>
	<p>This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...</p>	<p>Page 476 line 34 to page 477 line 8.</p>

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		References	
Language		Language		Language	
					Appendix A
					ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
Dependent Claim 280. The method of claim 98, wherein said timing instruction includes a schedule.					
Dependent Claim 281. The method of claim 280, further comprising the step of causing said transmission station to transmit said plurality of signals in accordance with said schedule.					
		Column 11 lines 21-22.	Such input information might include the cable television system's complete programming schedule,...	Page 326 lines 30-31.	Such input information can include the complete programming schedule of the station of Fig. 6,....
		Column 11 lines 38-39.	By comparing identification signals on the incoming programming with the programming schedule ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
				Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		Language	
Appendix A					
				Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
				Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
Dependent Claim 282.					
The method of claim 280, further comprising the step of detecting an identifier in said plurality of signals.	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...	Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....	
Dependent Claim 283.					
The method of claim 282, further comprising the step of comparing said identifier to information contained in said schedule.	Column 11 lines 38-39.	By comparing identification signals on the incoming programming with the programming schedule ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A

		This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...
Dependent Claim 285. The method of claim 284, wherein said instruct-to-coordinate signal includes an identifier.	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2. Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
Dependent Claim 286. The method of claim 98, further comprising the step reordering two of said plurality of signals.	Column 11 line 67 to Column 12 line 8.	If controller/ computer, 73, determines at any time that it is necessary to reorganize the order in which	Page 331 lines 17-33. Page 331 lines 16-25.	Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. ... Caused to organize the locations of said units to play according to said schedule, computer 73, ... Computer, 73, has capacity for

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
	Language	Language
	<p>programming units are stored on either recorder/player or on both, ...</p> <p>... controller/computer, 73, can use techniques for reorganizing files stored on multidisk units, which techniques are well known to computer operators, and order the execution of such techniques by passing appropriate instructions to of matrix switch, 75, and recorder/ players, 76 and 78.</p>	<p>Page 334 lines 1-6.</p> <p>Page 331 line 17 to page 334 line 6</p> <p>For example, page 331 lines 17-33.</p>
		<p>automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. For example, four spot commercials--program units Q, Y, W, and D—are loaded on 76 and 78. D and Q are recorded on the video tape loaded on recorder, 76, with D first. W and Y are recorded on the tape on recorder, 78, with W first.</p> <p>In this fashion, computer, 73, causes units Y and W to be located on different recorders because said units are scheduled to be transmitted simultaneously and units Y then D to be located in sequence on the same recorder because unit D is scheduled to play on the same channel immediately after Y.</p> <p><i>See generally.</i></p> <p>Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. For example, four spot commercials--program units Q, Y, W, and D—are loaded on 76 and 78. D and Q are recorded on the video tape loaded on recorder, 76, with D first. W and Y are recorded on the tape on recorder, 78, with W first. According to the schedule recorded at computer, 73, Q should play first on the cable channel modulated by cable channel modulator, 83; then subsequently Y and W should start to play simultaneously on the channels modulated by modulators, 83 and 87 respectively; then D should play on the channel modulated by modulator, 83.</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
Appendix A		
		immediately after Y ends. Caused to organize the locations of said units to play according to said schedule, computer 73, ...
		Determining said located space to be available causes computer, 73, to cause recorder, 76, to move forward or rewind to the start of program unit D; to cause recorder, 78, to rewind to the start of said located space; and to cause switch, 75, to configure its switches so as to transfer the output of recorder, 76, to the input of recorder, 78. Automatically, computer, 73, then causes recorder, 76, to play and recorder, 78, to record for the duration of program unit D. ...
		Computer, 73, causes recorder, 78, to move forward or rewind to the start of program unit Y; causes recorder, 76, to rewind to the start of the available space; and causes switch, 75, to configure its switches so as to transfer the output of recorder, 78, to the input of recorder, 76. Computer, 73, causes recorder, 78, to play and recorder, 76, to record for the duration of program unit Y. ...
		In this fashion, computer, 73, causes units Y and W to be located on different recorders because said units are scheduled to be transmitted simultaneously and units Y then D to be located in sequence on the same recorder because unit D is scheduled to play on the same channel immediately after Y.
Dependent Claim 287.		
The method of claim 103, wherein said timing instruction causes said transmitter station to transmit one of said plurality of	Column 11 lines 50-57.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73,

Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
Claim Language	References	Language	References
signals immediately.		switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	
Dependent Claim 288. The method of claim 103, wherein said timing instruction causes said transmitter station to delay transmission of one of said plurality of signals.	Column 11 lines 57-65.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 329 line 2-22.
		switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	
		to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.	
			Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder,

Appendix A

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
		References	Language	References	Language
Appendix A					
Dependent Claim 289. The method of claim 103, further comprising the step of comparing information contained in said plurality of signals to a portion of said timing instruction.					76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming with the programming schedule ...		Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
				Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
				Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
Dependent Claim 290. The method of claim 289, wherein said				Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...		Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	References	References	Language
<p>information contained in said plurality of signals includes a first identifier and</p> <p>said portion of said timing instruction includes a second identifier.</p> <p>Dependent Claim 291. The method of claim 103, wherein said multimedia presentation includes</p>	<p>Column 11 lines 21-24.</p>	<p>dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available,....</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information.</p> <p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 326 lines 30-33.</p>	<p>Appendix A</p>
	<p>Column 19 line 67 to column 20 line 2.</p>	<p>TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio</p>	

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
		References		References	
		Language		Language	
programming communicated in a first of said multimedia signals.		Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	generated graphic. During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
Dependent Claim 292.					
The method of claim 291, further comprising the step of generating a portion of said multimedia presentation		Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
	in response to a second of said multimedia signals.	Column 19 lines 60-66.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, ...	Page 25 line 33 to page 26 line 2.. Page 37 line 26 to page 38 line 8.	Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Support to instant specification filed June 6, 1995.
References	Language	Language	Language
			Appendix A
Dependent Claim 294.			means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.
The method of claim 108, further comprising the step of recognizing an order in which said plurality of signals are one of stored, communicated, and processed.	Column 11 line 67 to Column 12 line 8.	If controller/ computer, 73, determines at any time that it is necessary to reorganize the order in which programming units are stored on either recorder/player or on both, ...	<p>Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. ... Caused to organize the locations of said units to play according to said schedule, computer 73, ...</p> <p>Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. For example, four spot commercials--program units Q, Y, W, and D—are loaded on 76 and 78. D and Q are recorded on the video tape loaded on recorder, 76, with D first. W and Y are recorded on the tape on recorder, 78, with W first.</p> <p>In this fashion, computer, 73, causes units Y and W to be located on different recorders because said units are scheduled to be transmitted simultaneously and units Y then D to be located in sequence on the same recorder because unit D is scheduled to play on the same channel immediately after Y.</p> <p><i>See generally.</i></p>
		Page 331 lines 17-33.	
		Page 331 lines 16-25.	
		Page 334 lines 1-6.	
	... controller/computer, 73, can use	Page 331 line 17 to	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	References	Language
	<p>techniques for reorganizing files stored on multidisk units, which techniques are well known to computer operators, and order the execution of such techniques by passing appropriate instructions to of matrix switch, 75, and recorder/ players, 76 and 78.</p>	<p>page 334 line 6 For example, page 331 lines 17-33.</p>	<p>Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. For example, four spot commercials--program units Q, Y, W, and D--are loaded on 76 and 78. D and Q are recorded on the video tape loaded on recorder, 76, with D first. W and Y are recorded on the tape on recorder, 78, with W first. According to the schedule recorded at computer, 73, Q should play first on the cable channel modulated by cable channel modulator, 83; then subsequently Y and W should start to play simultaneously on the channels modulated by modulators, 83 and 87 respectively; then D should play on the channel modulated by modulator, 83, immediately after Y ends. Caused to organize the locations of said units to play according to said schedule, computer 73, ...</p> <p>Determining said located space to be available causes computer, 73, to cause recorder, 76, to move forward or rewind to the start of program unit D; to cause recorder, 78, to rewind to the start of said located space; and to cause switch, 75, to configure its switches so as to transfer the output of recorder, 76, to the input of recorder, 78. Automatically, computer, 73, then causes recorder, 76, to play and recorder, 78, to record for the duration of program unit D. ...</p> <p>Computer, 73, causes recorder, 78, to move forward or rewind to the start of program unit Y; causes recorder, 76, to rewind to the start of the available space; and causes switch, 75, to configure its switches so as to transfer the</p>
		<p>For example, page 332 lines 23-31.</p>	
		<p>For example, page 333 lines 15-21.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
	References	Language	References	Language

Appendix A

				output of recorder, 78, to the input of recorder, 76. Computer, 73, causes recorder, 78, to play and recorder, 76, to record for the duration of program unit Y. ... In this fashion, computer, 73, causes units Y and W to be located on different recorders because said units are scheduled to be transmitted simultaneously and units Y then D to be located in sequence on the same recorder because unit D is scheduled to play on the same channel immediately after Y.
			For example, page 334 lines 1-6.	
Dependent Claim 295. The method of claim 108, further comprising the step organizing files containing said plurality of signals.	Column 11 line 67 to Column 12 line 8.	If controller/ computer, 73, determines at any time that it is necessary to reorganize the order in which programming units are stored on either recorder/player or on both, ...	Page 331 lines 17-33. Page 331 lines 16-25.	Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. ... Caused to organize the locations of said units to play according to said schedule, computer 73, ... Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. For example, four spot commercials--program units Q, Y, W, and D—are loaded on 76 and 78. D and Q are recorded on the video tape loaded on recorder, 76, with D first. W and Y are recorded on the tape on recorder, 78, with W first. In this fashion, computer, 73, causes units Y and W to be located on different recorders because said units are scheduled to be transmitted simultaneously and units Y then D to be located in sequence on the same recorder
			Page 334 lines 1-6.	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Support to instant specification filed June 6, 1995.
Language	Language	References	Language
	<p>... controller/computer, 73, can use techniques for reorganizing files stored on multidisk units, which techniques are well known to computer operators, and order the execution of such techniques by passing appropriate instructions to of matrix switch, 75, and recorder/ players, 76 and 78.</p>	<p>Page 331 line 17 to page 334 line 6</p> <p>For example, page 331 lines 17-33.</p> <p>For example, page 332 lines 23-31.</p> <p>For example, page 333</p>	<p>Appendix A</p> <p>because unit D is scheduled to play on the same channel immediately after Y.</p> <p><i>See generally.</i></p> <p>Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. For example, four spot commercials--program units Q, Y, W, and D--are loaded on 76 and 78. D and Q are recorded on the video tape loaded on recorder, 76, with D first. W and Y are recorded on the tape on recorder, 78, with W first. According to the schedule recorded at computer, 73, Q should play first on the cable channel modulated by cable channel modulator, 83; then subsequently Y and W should start to play simultaneously on the channels modulated by modulators, 83 and 87 respectively; then D should play on the channel modulated by modulator, 83, immediately after Y ends. Caused to organize the locations of said units to play according to said schedule, computer 73, ...</p> <p>Determining said located space to be available causes computer, 73, to cause recorder, 76, to move forward or rewind to the start of program unit D; to cause recorder, 78, to rewind to the start of said located space; and to cause switch, 75, to configure its switches so as to transfer the output of recorder, 76, to the input of recorder, 78. Automatically, computer, 73, then causes recorder, 76, to play and recorder, 78, to record for the duration of program unit D. ...</p> <p>Computer, 73, causes recorder, 78, to move</p>

Claim Language	References	Language	References	Language
			lines 15-21.	forward or rewind to the start of program unit Y; causes recorder, 76, to rewind to the start of the available space; and causes switch, 75, to configure its switches so as to transfer the output of recorder, 78, to the input of recorder, 76. Computer, 73, causes recorder, 78, to play and recorder, 76, to record for the duration of program unit Y. ... In this fashion, computer, 73, causes units Y and W to be located on different recorders because said units are scheduled to be transmitted simultaneously and units Y then D to be located in sequence on the same recorder because unit D is scheduled to play on the same channel immediately after Y.
Dependent Claim 296. The method of claim 108, wherein said processor is controlled on the basis of an identifier.	Column 18 lines 22-24.	Monitor or processor, 204, also identifies signals addressed to tuner, 213, which it transfers accordingly.	For example, page 334 lines 1-6.	
			Page 408 lines 31-34. Page 95 lines 18-24.	Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209. Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to ... , and to transfer said message to So transferring said message is the controlled function that the information said header and execution segment cause controller, 39, to perform.
Dependent Claim 297. The method of claim 296, further comprising the step of programming said processor to compare a portion of said plurality	Column 18 lines 56-58.	...signal processor, 200, to hold examples of the sought for unique signals in its buffer/ comparator, 8, and compare them with all incoming signals.	Page 420 lines 6-20.	The signal processor, 200, of said station is preprogrammed ... with particular news-items-of-interest information that includes identification information of the particular stocks in said portfolio.... One company whose stock is

Appendix A

Claim Language		Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.		Support to instant specification filed June 6, 1995.	
References		Language		References	
Language		Language		Language	
<p>of signals to said identifier.</p> <p>Dependent Claim 298.</p> <p>The method of claim 296, further comprising the step of comparing each of said plurality of signals to said identifier.</p>					<p>preprogrammed at said microprocessor, 205, is the American Telephone and Telegraph Company whose stock is identified by particular binary information of "T". And among the news-items-of-interest information at said RAM is an instance of said binary information of "T".</p> <p>...said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information....</p>
				<p>Page 422 lines 33 to Page 423 line 4.</p>	
	<p>Column 18 lines 58-62.</p>	<p>Signal processor, 200, scans sequentially all channels. When it identifies a signal of interest, it relays that information and the channel identifier, in this illustration, to microcomputer, 205.</p>	<p>Page 422 line 23 to page 423 line 10.</p>	<p>At the station of Fig. 7 and 7C, signal processor, 200, scans sequentially all channels at its switch, 1, mixer, 3, and decoder, 30, in the fashion of example #5.</p> <p>In due course, one instance of said Select-AT&T-News-Item message is detected at said decoder, 30, and inputted to the controller, 39, of said decoder, 30.</p> <p>Receiving said Select-AT&T-News-Item message causes said controller, 39, to transmit said message to the controller, 20, of said signal processor, 200. ... Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5.</p>	<p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
		Appendix A
<p>Dependent Claim 299.</p> <p>The method of claim 296, wherein said plurality of signals includes said identifier.</p>	<p>Column 17 lines 39-44.</p> <p>Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming transmissions, identify and discriminate among one or more pieces of external equipment to which such signals are addressed, and transfer such signals to such equipment as directed.</p>	<p>Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p>
<p>Dependent Claim 300.</p> <p>The method of claim 108, further comprising the step of determining one of a programming kind and</p>	<p>Column 11 lines 32-39.</p> <p>By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information,</p>
	<p>Page 15 lines 16-23.</p>	<p>The frequencies may convey television, radio, or other programming transmissions.... The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ...</p>
	<p>Page 34 lines 24-26.</p>	<p>... identifies the particular apparatus to which said signals are addressed, and outputs said signals to said apparatus ...</p>
		<p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ...</p>
	<p>Page 44 lines 14-15.</p>	<p>Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205.</p>
	<p>Page 95 lines 18-21.</p>	
	<p>Page 327 line 35 to page 328 line 13.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
<p>subject matter contained in said plurality of signals.</p>	<p>through 62, and is passing in line on each individual wire to matrix switch, 75. By comparing identification signals on the incoming programming with the programming schedule ...</p>	<p>received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>If a given intermediate or output apparatus can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have sufficient apparatus to monitor every channel and kind of transmission it can receive.</p>
<p>Dependent Claim 301. The method of claim 120, wherein a first of said plurality of receiver stations is caused to</p>	<p>Column 15 lines 52-56.</p> <p>FIGS. 3A, 3B and 3C illustrates one instance of such use. Figure 3 illustrates the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts</p> <p>Column 10 lines 24-28.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 317 lines 2-6.</p> <p>Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	Language
References	References	References
Appendix A		
transmit said portion of said information transmission	<p>Column 11 lines 50-57.</p> <p>several channels of television programming.</p> <p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 328 line 22 to page 329 line 1.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
based on said signal and	<p>Column 11 lines 38-43.</p> <p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 327 line 35 to page 328 line 13.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Support to instant specification filed June 6, 1995.
	Language	References	Language
<p>a second of said plurality of receiver stations is caused to</p> <p>store portion of said information transmission</p>	<p>Column 17 lines 47-53.</p> <p>FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.</p> <p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p> <p>Column 19 lines 20-23.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 390 lines 30-35.</p> <p>Page 396 lines 8-10.</p> <p>Page 267 lines 20-28.</p> <p>Page 435 lines 16-25.</p>	<p>Appendix A</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.</p> <p>Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) By contrast, the...</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Language
References	Language	References	Language
		<p>Page 436 line 9 to page 437 line 3.</p>	<p>Appendix A</p> <p>processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p>
		<p>Page 439 lines 14-15.</p>	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Language	Language	Language
x Column 19 lines 23-24.	x Then, in a predetermined fashion, microcomputer, 205, may...	x Page 437 lines 1-6.
Column 19 lines 24-25.	...instruct tuner, 214, to switch box, 201, to channel X...	Page 439 lines 9-15.
Column 19 lines 25-27.	...and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...	Page 445 lines 24-27.
Column 19 lines 17-23.	... processor or monitor, 12, ... reacts, ... by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines based on said signal.	Page 446 lines 18-23.
		Page 435 lines 16-18.
		Page 267 lines 20-28 from example #5.
	</	

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	References	References
Language	Language	Language
	that "Wall Street Week" is being televised on channel X.	<p>and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to</i></p>
		<p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>

Appendix A

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	References	Language
						Appendix A
select one of	Column 11 lines 50-54.			Page 84 lines 26-28.		channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
				Page 28 lines 26-27.		SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
				Page 49 lines 26-27.		... monitor information that identifies what programming is available, ...
				Page 328 lines 22-31.		Meter-monitor segments contain meter information and/or monitor information.
a plurality of transmitters and communicate said portion of said information transmission to said selected one of said plurality of transmitters.	Column 10 lines 43-47.	For example, if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, ...		Page 325 lines 1-4.		For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information. ... Receiving said message causes computer, 73, to determine ... that said "code" information matches ... schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87.
Dependent Claim 303.		...and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.				...apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.
The method of claim 120, wherein one of said plurality of	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio		Page 390 lines 30-35.		Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.	Appendix A
References	Language	Language	Language
<p>receiver stations is</p> <p>caused to receive said portion of said information transmission</p>	<p>receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.</p> <p>Column 19 lines 20-25.</p> <p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...</p>	<p>the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.</p> <p>Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) By contrast, the...</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that</p>	<p>Page 396 lines 8-10.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	References	References
Language	Language	Language
		<p>Appendix A</p> <p>contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13; ...</p> <p>Page 439 lines 14-15.</p> <p>Page 437 lines 1-6.</p> <p>Page 439 lines 9-15.</p>
		<p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p>

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	Support to instant specification filed June 6, 1995.
References	Language	References
Appendix A		
based on said signal.		Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...
		...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
	Column 19 lines 17-23..	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...
		All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
		In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ... Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.
		Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to
		Page 295 lines 6-8.
		Page 439 lines 9-15.
		Page 435 lines 16-18.
		Page 267 lines 20-28 from example #5.
		Page 435 lines 16-25.
		Page 436 line 9 to page 437 line 3.

Claim Language	Support to Applicants' U.S. Pat. No. 4,690,490 filed November 3, 1981.	References	Language	Support to instant specification filed June 6, 1995.	References	Language
				<p>the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p>	<p>Appendix A</p> <p>Page 439 lines 14-15.</p>	

APPENDIX B

PATENTABLE SUBJECT MATTER OF
INSTANT CLAIMS OVER
APPLICANTS' PATENTED CLAIMS

The following charts provide a claim comparison of each of Applicants' instant independent claims²⁵ to specific ones of Applicant's patented²⁶ claims. The Office Action stated in paragraphs 52 that claims 2-303 are rejected under the judicially created doctrine of obviousness-type double patenting over at least one or more of Applicants' six issued patents, (see footnote 26). However, the Office Action only compared the claims listed in footnote 26 to each of Applicants' instant independent claims. There was no other analysis to any other of Applicants' patented claims with those of the instant application.

Applicants provide an analysis in Appendix B to show that the instant independent claims are patentably distinct from the specified patented independent claims.

For the Examiner's convenience only, Applicants have underlined portions in the left columns of the instant 28 independent claims to designate the clearest and most succinct portions of the claim language that Applicants believe are patentably distinct from the patented independent claims in the right columns. Applicants assert that any lack of underlining in the instant independent claims in no way indicates these portions are common to the subject matter of the patented claims.

Below each claim comparison table are further explanations of how the claims are patentable distinct from each other, i.e., all of the instant independent claims are method claims whereas many of the patented claims are apparatus claims.

²⁵ Independent claims 2, 3, 8, 13, 18, 23, 25, 26, 31, 36, 41, 46, 64, 65, 70, 75, 80, 85, 87, 88, 93, 103, 108, 119 & 120, totaling 28 claims.

²⁶ Applicants' U.S. Pat. No. 4,694,490, claim 1; U.S. Pat. No. 4,704,725, claims 1 & 3; U.S. Pat. No. 4,965,825, claims 1, 4 & 14; U.S. Pat. No. 5,109,414, claim 26; and U.S. Pat. No. 5,335,277, claim 14.

Application Claim 2	U.S. Pat. No. 4,965,825, Claim 1
<p>2. A method of transmitting signals comprising the steps of:</p> <p><u>inputting a signal and a transmission schedule associated with said signal, said transmission schedule including code designating said signal and at least one of:</u></p> <p><u>a time at which to transmit said signal; and</u></p> <p><u>one of a frequency and an output network on which to transmit said signal;</u></p> <p><u>transmitting said signal according to said transmission schedule;</u></p> <p><u>selecting one of said code and an identifier associated with said signal; and</u></p> <p><u>logging transmission of said signal.</u></p>	<p>1. In a signal processor system,</p> <p>carrier transmission receiving means;</p> <p>means for demodulating said carrier transmission to detect an information transmission thereon;</p> <p>detector means for detecting an embedded signal in the information transmission and removing it from said information transmission;</p> <p>first control means responsive to said detected signal to activate and/or deactivate equipment external to said signal processor system;</p> <p>second control means activated by said detected signal to monitor the performance and/or output of said first control means;</p> <p>a recorder means for receiving and recording data collected by said monitor means;</p> <p>and control means for instructing said recorder to direct information recorded thereon to a remote site.</p>

Claim 2 recites methods for accomplishing certain steps in the operating environment of a receiver station, i.e., an interactive video apparatus. This differentiates claim 2 over the patented claim's recitations of elements of an apparatus.

Application Claim 3	U.S. Pat. No. 4,704,725, Claim 3
<p>3. A method of processing signals to control a plurality of receiver stations, each receiver station having a processor, said method comprising the steps of:</p> <p><u>receiving an information transmission and</u></p> <p><u>communicating said information transmission to a storage device;</u></p> <p><u>receiving a control signal which is effective to control a first of said plurality of receiver stations to transmit said information transmission and to control a second of said plurality of receiver stations to identify and process at least a portion of said transmitted information transmission;</u></p> <p><u>selecting one of the group consisting of:</u></p> <p><u>a time at which to communicate said control signal; and</u></p> <p><u>a storage location to which to communicate said control signal;</u></p> <p><u>communicating said control signal based on said step of selecting; and</u></p> <p><u>storing said communicated information transmission and said control signal at said storage device.</u></p>	<p>3. A method of communicating data to a multiplicity of receiver stations each of which includes a computer adapted to generate and transmit user specific signals to one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify the user specific signals transmitted to their associated output devices, each of said computers being programmed to accommodate a special user application, comprising the steps of:</p> <p>transmitting an instruct-to-transmit signal to said computers at a time when the corresponding user specific information is not being transmitted to an output device,</p> <p>detecting the presence of said instruct-to-transmit signal at selected receiver stations and coupling said instruct-to-transmit signal to the computers associated with said selected stations, and</p> <p>causing said last named computers to generate and transmit their user specific signals to their associated output devices in response to said instruct-to-transmit signal, thereby to transmit to the selected output devices an output signal comprising said data and said related user specific signals, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.</p>

Application Claim 8	U.S. Pat. No. 5,109,414, Claim 26
8. A method of encoding signals to control a plurality of	26. A method of communicating television programming

<p>receiver stations comprising the steps of:</p> <p>receiving and storing a first information transmission containing one of a first video image and audio;</p> <p>receiving a second information transmission, wherein said second information transmission is effective to control a first of said plurality of receiver stations to transmit said first information transmission and to control a second of said plurality of receiver stations to identify and process at least a portion of said transmitted first information transmission;</p> <p>encoding said second information transmission into a first control signal, said first control signal for controlling predetermined receiver stations of said plurality of receiver stations by processing locally stored receiver station specific data; and</p> <p>storing said first control signal from said step of encoding.</p>	<p>in a system that consists of a transmission station and a plurality of receiving stations, each receiving station having at least one detector, one video recorder and one video player with at least one said detectors pre-programmed to detect program identification information, consisting of the steps of:</p> <p>transmitting a plurality of units of television pre-programming containing embedded program identification information,</p> <p>causing a selected receiving station to record a selected television program unit,</p> <p>causing said station to position the start of said program unit at the play head of a video player,</p> <p>causing said player thereafter to play and transmit at a selected time</p> <p>thereby to cause said selected station to transmit said selected unit at said selected time.</p>
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Application Claim 13	U.S. Pat. No. 4,965,825, Claim 4
<p>13. A method of communicating data to a network of data receiver stations each of which includes a data receiver, a data storage device, a control signal detector, a computer capable of processing said data, with each of said data receiver stations adapted to detect and respond to at least one control signal and to store said data for subsequent processing, and with at least one of said data receiver stations further including a transmitter, said method comprising the steps of:</p> <p>receiving said data to be transmitted from at least one origination station;</p> <p>receiving said at least one control signal to be transmitted from said at least one origination station, wherein said at least one control signal is effective in said network to control a first of said data receiver stations to transmit said data and to control a second of said data receiver stations to identify and process at least a portion of said transmitted data; and</p> <p>transmitting an information transmission from said at least one origination station comprising said received data and said received at least one control signal.</p>	<p>4. In a signal processor, carrier transmission receiving means;</p> <p>means for demodulating said carrier transmission to detect an information transmission thereon;</p> <p>detector means for determining the presence or absence of an embedded signal in said information transmission within a predetermined time interval and for detecting said signal and removing it from said information transmission;</p> <p>buffer means for organizing said detected signals with detected signals from other detector means into a data stream;</p> <p>recorder means for receiving and recording said stream;</p> <p>control means for instructing said carrier receiving means to receive the appropriate carrier transmission within said predetermined time interval and to direct received said carrier transmission to said demodulating means and said detector means;</p> <p>control means for instructing said recorder to direct information recorded thereon to a remote site;</p> <p>control means responsive to some of said detected signals in said data stream to activate and/or deactivate equipment external to said signal processor;</p> <p>and control means responsive to some other of said detected signals in said data stream to alter the location in succeeding information transmissions examined for embedded signals.</p>

Claim 13 recites methods for accomplishing certain steps in the operating environment of a receiver station, i.e., an interactive video apparatus. This differentiates claim 13 over the patented claim's recitations of elements of an apparatus.

Application Claim 18	U.S. Pat. No. 4,704,725, Claim 3
<p>18. <u>A method of communicating mass medium programming to a network of programming receiver stations each of which includes a programming receiver, an output device, a control signal detector, a processor operatively connected to said output device, with each of said programming receiver stations adapted to detect and respond to at least one control signal, and with at least one of said programming receiver stations further including a transmitter, said method comprising the steps of:</u></p> <p><u>receiving mass medium programming to be transmitted from an origination station;</u></p> <p><u>receiving said at least one control signal to be transmitted from said origination station, wherein said at least one control signal is effective in said network to control a first of said programming receiver stations to transmit said mass medium programming and to control a second of said programming receiver stations to identify and process at least a portion of said transmitted mass medium programming; and</u></p> <p><u>transmitting an information transmission from said origination station comprising said received mass medium programming and said received at least one control signal.</u></p>	<p>3. A method of communicating data to a multiplicity of receiver stations each of which includes a computer adapted to generate and transmit user specific signals to one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify the user specific signals transmitted to their associated output devices, each of said computers being programmed to accommodate a special user application, comprising the steps of:</p> <p>transmitting an instruct-to-transmit signal to said computers at a time when the corresponding user specific information is not being transmitted to an output device,</p> <p>detecting the presence of said instruct-to-transmit signal at selected receiver stations and coupling said instruct-to-transmit signal to the computers associated with said selected stations, and</p> <p>causing said last named computers to generate and transmit their user specific signals to their associated output devices in response to said instruct-to-transmit signal, thereby to transmit to the selected output devices an output signal comprising said data and said related user specific signals, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.</p>

Application Claim 23	U.S. Pat. No. 4,704,725, Claim 3
<p>23. <u>A method of controlling a network of receiver stations each of which includes a signal receiver, a signal detector, said signal detector adapted to receive signals from an information transmission, and a processor programmed to respond to signals from said signal detector, with at least one of said receiver stations further including a transmitter, said method comprising the steps of:</u></p> <p><u>receiving at least one control signal to be transmitted from an origination station, said at least one control signal effective in said network to control a first of said receiver stations to transmit said information transmission and to control a second of said receiver stations to identify and process at least a portion of said transmitted information transmission;</u></p> <p><u>receiving at least one designation signal to be transmitted from said origination station, said at least one designation signal designating at least one receiver station of said network of receiver stations to which said at least one control signal is addressed; and</u></p> <p><u>transmitting said information transmission from said origination station, said information transmission comprising said received at least one control signal and said received at least one designation signal.</u></p>	<p>3. A method of communicating data to a multiplicity of receiver stations each of which includes a computer adapted to generate and transmit user specific signals to one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify the user specific signals transmitted to their associated output devices, each of said computers being programmed to accommodate a special user application, comprising the steps of:</p> <p>transmitting an instruct-to-transmit signal to said computers at a time when the corresponding user specific information is not being transmitted to an output device,</p> <p>detecting the presence of said instruct-to-transmit signal at selected receiver stations and coupling said instruct-to-transmit signal to the computers associated with said selected stations, and</p> <p>causing said last named computers to generate and transmit their user specific signals to their associated output devices in response to said instruct-to-transmit signal, thereby to transmit to the selected output devices an output signal comprising said data and said related user specific signals, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.</p>

Application Claim 25	U.S. Pat. No. 4,704,725, Claim 3
<p>25. <u>A method of processing signals in a communications network, said communications network having at least one transmitter station and at least one receiver station, said method comprising the steps of:</u></p> <p><u>inputting a signal and a transmission schedule associated with said signal, said schedule comprising at least one of:</u> <u>a time at which to transmit said signal; and</u> <u>one of a frequency and an output network on which to transmit said signal;</u> <u>transmitting said signal according to said schedule;</u> <u>selecting at least a portion of information communicated one of to a transmitter and from a transmitter; and</u> <u>comparing said at least a portion of information to a portion of said schedule, thereby to determine proper transmission of said signal according to said schedule;</u> <u>wherein said method processes signals in said communications network.</u></p>	<p>3. A method of communicating data to a multiplicity of receiver stations each of which includes a computer adapted to generate and transmit user specific signals to one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify the user specific signals transmitted to their associated output devices, each of said computers being programmed to accommodate a special user application, comprising the steps of:</p> <p>transmitting an instruct-to-transmit signal to said computers at a time when the corresponding user specific information is not being transmitted to an output device,</p> <p>detecting the presence of said instruct-to-transmit signal at selected receiver stations and coupling said instruct-to-transmit signal to the computers associated with said selected stations, and</p> <p>causing said last named computers to generate and transmit their user specific signals to their associated output devices in response to said instruct-to-transmit signal, thereby to transmit to the selected output devices an output signal comprising said data and said related user specific signals, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.</p>

Application Claim 26	U.S. Pat. No. 5,335,277, Claim 14
<p>26. <u>A method of transmitting signals in a network, said network having a transmitter station and a receiver station, said method comprising the steps of:</u></p> <p><u>inputting a signal and a transmission schedule associated with said signal, said schedule including at least one of:</u> <u>a time at which to transmit said signal; and</u> <u>one of a frequency and an output network on which to transmit said signal;</u> <u>transmitting said signal according to said schedule;</u> <u>selecting a portion of said signal; and</u> <u>comparing said selected portion of said signal to information stored in said network; and</u> <u>determining one of a transmission time and a transmission location of said signal.</u></p>	<p>14. A television receiver station comprising:</p> <p>a plurality of receiver/distributors with at least one receiving a television programming transmission, each transmission including the television programming and programming identification signals identifying the programming;</p> <p>an output device for displaying television programming or transmitting television programming to a remote subscriber station;</p> <p>a storage device for receiving and storing television programming;</p> <p>means for selectively receiving television programming from either one of said receiver/distributors or said storage device and selectively transferring the received television programming to either said storage device or to said output device;</p> <p>a processor operatively connected to at least one of said plurality of receiver/distributors for receiving the programming and the programming identification information; and</p> <p>a controller operatively connected to said processor for receiving specific unit programming identification information, identifying a specific unit of television programming received at a specific receiver/distributor by comparing of received identification information to</p>

	previously received scheduled program identification information, and passing programming to either said output device or to said storage device based upon said scheduled information.
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Claim 26 recites methods for accomplishing certain steps in the operating environment of a receiver station, i.e., an interactive video apparatus. This differentiates claim 26 over the patented claim's recitations of elements of an apparatus.

Application Claim 31	U.S. Pat. No. 5,335,277, Claim 14
<p>31. <u>A method of processing a signal in a system comprising a transmitter station and a receiver station, said method comprising the steps of:</u> <u>inputting to said transmitter station said signal and a transmission schedule associated with said signal, said signal including a first identifier, said schedule including a second identifier and at least one of:</u> <u>a time at which to transmit said signal; and</u> <u>one of a frequency and an output network on which to transmit said signal;</u> <u>comparing said first identifier and said second identifier;</u> <u>transmitting said signal to said receiver station according to said schedule based on said step of comparing;</u> <u>selecting a portion of said signal at said receiver station;</u> <u>and</u> <u>inputting said selected portion of said signal to a processor for gathering statistics on programming availability, use or usage.</u></p>	<p>14. A television receiver station comprising: a plurality of receiver/distributors with at least one receiving a television programming transmission, each transmission including the television programming and programming identification signals identifying the programming; an output device for displaying television programming or transmitting television programming to a remote subscriber station; a storage device for receiving and storing television programming; means for selectively receiving television programming from either one of said receiver/distributors or said storage device and selectively transferring the received television programming to either said storage device or to said output device; a processor operatively connected to at least one of said plurality of receiver/distributors for receiving the programming and the programming identification information; and a controller operatively connected to said processor for receiving specific unit programming identification information, identifying a specific unit of television programming received at a specific receiver/distributor by comparing of received identification information to previously received scheduled program identification information, and passing programming to either said output device or to said storage device based upon said scheduled information.</p>

Claim 31 recites methods for accomplishing certain steps in the operating environment of a receiver station, i.e., an interactive video apparatus. This differentiates claim 31 over the patented claim's recitations of elements of an apparatus.

Application Claim 36	U.S. Pat. No. 4,965,825, Claim 1
<p>36. <u>A method of processing a signal in a system having a transmitter station and a receiver station, said method comprising the steps of:</u> <u>inputting said signal at said transmitter station, said signal including programming and an identifier, said signal having a first portion;</u> <u>inputting a schedule at said transmitter station, said schedule including at least one of:</u></p>	<p>1. In a signal processor system, carrier transmission receiving means; means for demodulating said carrier transmission to detect an information transmission thereon; detector means for detecting an embedded signal in the information transmission and removing it from said information transmission; first control means responsive to said detected signal to activate and/or deactivate equipment external to said signal processor system; second control</p>

<u>a time at which to transmit said first portion of said signal; and</u> <u>one of a frequency and an output network on which to transmit said first portion of said signal;</u> <u>transmitting said first portion of said signal from said transmitter station according to said schedule based on a comparison performed with said identifier;</u> <u>processing at least a portion of said signal to gather at least one statistic on availability, use or usage of said programming at said receiver station; and</u> <u>identifying one of said signal and content of said signal at said receiver station on the basis of said identifier.</u>	means activated by said detected signal to monitor the performance and/or output of said first control means; a recorder means for receiving and recording data collected by said monitor means; and control means for instructing said recorder to direct information recorded thereon to a remote site.
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Claim 36 recites methods for accomplishing certain steps in the operating environment of a receiver station, i.e., an interactive video apparatus. This differentiates claim 36 over the patented claim's recitations of elements of an apparatus.

Application Claim 41	U.S. Pat. No. 5,335,277, Claim 14
41: <u>A method of communicating a plurality of signals, said method comprising the steps of:</u> <u>inputting a signal, said signal including programming and an identifier;</u> <u>inputting a schedule including a designation for each of said plurality of signals of at least one of</u> <u>an approximate transmission time, and</u> <u>one of a transmission frequency and an output network;</u> <u>transferring said signal to a distribution system of a transmission station according to said schedule;</u> <u>identifying one of said plurality of signals based on said identifier; and</u> <u>outputting said identifier from a storage location to a remote location.</u>	14. A television receiver station comprising: a plurality of receiver/distributors with at least one receiving a television programming transmission, each transmission including the television programming and programming identification signals identifying the programming; an output device for displaying television programming or transmitting television programming to a remote subscriber station; a storage device for receiving and storing television programming; means for selectively receiving television programming from either one of said receiver/distributors or said storage device and selectively transferring the received television programming to either said storage device or to said output device; a processor operatively connected to at least one of said plurality of receiver/distributors for receiving the programming and the programming identification information; and a controller operatively connected to said processor for receiving specific unit programming identification information, identifying a specific unit of television programming received at a specific receiver/distributor by comparing of received identification information to previously received scheduled program identification information, and passing programming to either said output device or to said storage device based upon said scheduled information.

Claim 41 recites methods for accomplishing certain steps in the operating environment of a receiver station, i.e., an interactive video apparatus. This differentiates claim 41 over the patented claim's recitations of elements of an apparatus.

Application Claim 46	U.S. Pat. No. 5,335,277, Claim 14
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<p>46. <u>A method of transmitting one of a plurality of signals comprising the steps of:</u> <u>inputting a signal, said signal including programming and an identifier;</u> <u>inputting a schedule to a controller for controlling a transmission station, said schedule including for each of said plurality of signals at least one of</u> <u>an approximate transmission time; and</u> <u>one of a transmission frequency and an output network;</u> <u>transmitting said signal according to said schedule;</u> <u>identifying said signal at a receiver station on the basis of said identifier; and</u> <u>outputting said identifier to a remote location.</u></p>	<p>14. A television receiver station comprising: a plurality of receiver/distributors with at least one receiving a television programming transmission, each transmission including the television programming and programming identification signals identifying the programming; an output device for displaying television programming or transmitting television programming to a remote subscriber station; a storage device for receiving and storing television programming; means for selectively receiving television programming from either one of said receiver/distributors or said storage device and selectively transferring the received television programming to either said storage device or to said output device; a processor operatively connected to at least one of said plurality of receiver/distributors for receiving the programming and the programming identification information; and a controller operatively connected to said processor for receiving specific unit programming identification information, identifying a specific unit of television programming received at a specific receiver/distributor by comparing of received identification information to previously received scheduled program identification information, and passing programming to either said output device or to said storage device based upon said scheduled information.</p>
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Claim 46 recites methods for accomplishing certain steps in the operating environment of a receiver station, i.e., an interactive video apparatus. This differentiates claim 46 over the patented claim's recitations of elements of an apparatus.

Application Claim 64	U.S. Pat. No. 4,704,725, Claim 3
<p>64. A method of communicating a signal comprising the steps of:</p> <p><u>inputting a signal, said signal including specific programming including one of video, audio and data programming and an embedded identifier;</u> <u>inputting said signal to a switch and a processor;</u> <u>determining said specific programming inputted to said switch;</u> <u>controlling said switch to communicate said specific programming according to timing instructions; and</u> <u>delaying communication of said signal.</u></p>	<p>3. A method of communicating data to a multiplicity of receiver stations each of which includes a computer adapted to generate and transmit user specific signals to one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify the user specific signals transmitted to their associated output devices, each of said computers being programmed to accommodate a special user application, comprising the steps of:</p> <p>transmitting an instruct-to-transmit signal to said computers at a time when the corresponding user specific information is not being transmitted to an output device, detecting the presence of said instruct-to-transmit signal at selected receiver stations and coupling said instruct-to-transmit signal to the computers associated with said selected stations, and causing said last named computers to generate and transmit their user specific signals to their associated output devices in response to said instruct-to-transmit signal,</p>

	thereby to transmit to the selected output devices an output signal comprising said data and said related user specific signals, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.
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Application Claim 65	U.S. Pat. No. 4,704,725, Claim 3
<p>65. A method of processing signals comprising the steps of:</p> <p><u>inputting a plurality of signals to a transmission station, wherein each of said plurality of signals includes one of specific video programming, audio programming, and data programming and an identifier;</u></p> <p><u>inputting at said transmission station each of said plurality of signals to a switch having a plurality of output channels;</u></p> <p><u>processing each signal of said plurality of signals to determine that each of said one of specific video programming, audio programming, and data programming is input to said switch;</u></p> <p><u>comparing said identifier of each signal of said plurality of signals to predetermined data to determine when to transmit each signal of said plurality of signals; and</u></p> <p><u>communicating an instruction to delay communication of one signal of said plurality of signals.</u></p>	<p>3. A method of communicating data to a multiplicity of receiver stations each of which includes a computer adapted to generate and transmit user specific signals to one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify the user specific signals transmitted to their associated output devices, each of said computers being programmed to accommodate a special user application, comprising the steps of:</p> <p>transmitting an instruct-to-transmit signal to said computers at a time when the corresponding user specific information is not being transmitted to an output device,</p> <p>detecting the presence of said instruct-to-transmit signal at selected receiver stations and coupling said instruct-to-transmit signal to the computers associated with said selected stations, and</p> <p>causing said last named computers to generate and transmit their user specific signals to their associated output devices in response to said instruct-to-transmit signal, thereby to transmit to the selected output devices an output signal comprising said data and said related user specific signals, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.</p>

Application Claim 70	U.S. Pat. No. 5,335,277, Claim 14
<p>70. A method of communicating a signal comprising the steps of:</p> <p><u>inputting a signal to a switch at a transmission station, said signal including an identifier and one of video and audio, said switch having a plurality of output channels;</u></p> <p><u>comparing said identifier to a predetermined datum to determine one of a time to transmit said signal and whether to delay transmission of said signal;</u></p> <p><u>selecting a storage location; and</u></p> <p><u>communicating said signal to said selected storage location.</u></p>	<p>14. A television receiver station comprising:</p> <p>a plurality of receiver/distributors with at least one receiving a television programming transmission, each transmission including the television programming and programming identification signals identifying the programming;</p> <p>an output device for displaying television programming or transmitting television programming to a remote subscriber station;</p> <p>a storage device for receiving and storing television programming;</p> <p>means for selectively receiving television programming from either one of said receiver/distributors or said storage device and selectively transferring the received television programming to either said storage device or to said output device;</p> <p>a processor operatively connected to at least one of said plurality of receiver/distributors for receiving the programming and the programming identification</p>

	information; and a controller operatively connected to said processor for receiving specific unit programming identification information, identifying a specific unit of television programming received at a specific receiver/distributor by comparing of received identification information to previously received scheduled program identification information, and passing programming to either said output device or to said storage device based upon said scheduled information.
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Claim 70 recites methods for accomplishing certain steps in the operating environment of a receiver station, i.e., an interactive video apparatus. This differentiates claim 70 over the patented claim's recitations of elements of an apparatus.

Application Claim 75	U.S. Pat. No. 5,335,277, Claim 14
<p>75. <u>A method of processing a plurality of signals comprising the steps of:</u> <u>inputting said plurality of signals at a transmission station, each signal of said plurality of signals comprising an identifier and at least one of video programming, audio programming and data programming;</u> <u>inputting said plurality of signals to a switch having a plurality of output channels;</u> <u>processing each of said plurality of signals to determine which of said at least one of video programming, audio programming and data programming is input to said switch and when to transmit each of said plurality of signals;</u> <u>transmitting said plurality of signals to a processor in a distribution system, said processor having a plurality of output ports;</u> <u>communicating said plurality of signals to at least one remote location;</u> <u>determining that transmission of a specific signal of said plurality of signals should be delayed;</u> <u>selecting a storage location; and</u> <u>communicating said specific signal to said selected storage location.</u></p>	<p>14. A television receiver station comprising: a plurality of receiver/distributors with at least one receiving a television programming transmission, each transmission including the television programming and programming identification signals identifying the programming; an output device for displaying television programming or transmitting television programming to a remote subscriber station; a storage device for receiving and storing television programming; means for selectively receiving television programming from either one of said receiver/distributors or said storage device and selectively transferring the received television programming to either said storage device or to said output device; a processor operatively connected to at least one of said plurality of receiver/distributors for receiving the programming and the programming identification information; and a controller operatively connected to said processor for receiving specific unit programming identification information, identifying a specific unit of television programming received at a specific receiver/distributor by comparing of received identification information to previously received scheduled program identification information, and passing programming to either said output device or to said storage device based upon said scheduled information.</p>

Claim 75 recites methods for accomplishing certain steps in the operating environment of a receiver station, i.e., an interactive video apparatus. This differentiates claim 75 over the patented claim's recitations of elements of an apparatus.

Application Claim 80	U.S. Pat. No. 5,335,277, Claim 14
<p>80. <u>A method of processing signals in a system including a transmission station and a receiver station, said</u></p>	<p>14. A television receiver station comprising: a plurality of receiver/distributors with at least one</p>

<p>method comprising the steps of:</p> <p><u>programming said receiver station to store user data and select said signals on the basis of said user data;</u></p> <p><u>inputting a programming signal and a comparison signal at said transmission station, said comparison signal designating a transmission schedule;</u></p> <p><u>inputting said transmission schedule, said transmission schedule comprising for each of said signals at least two of:</u></p> <p><u>a transmission time;</u></p> <p><u>an identifier for one of a transmission frequency and an output network; and</u></p> <p><u>a signal identifier;</u></p> <p><u>transmitting said programming signal and said comparison signal from said transmission station in accordance with said transmission schedule based on said comparison signal;</u></p> <p><u>selecting information detected in one of said programming signal and said comparison signal at said receiver station;</u></p> <p><u>comparing said selected information to said user data; and</u></p> <p><u>receiving a portion of an information transmission containing said programming signal and said comparison signal at said receiver station based on said step of comparing.</u></p>	<p>receiving a television programming transmission, each transmission including the television programming and programming identification signals identifying the programming;</p> <p>an output device for displaying television programming or transmitting television programming to a remote subscriber station;</p> <p>a storage device for receiving and storing television programming;</p> <p>means for selectively receiving television programming from either one of said receiver/distributors or said storage device and selectively transferring the received television programming to either said storage device or to said output device;</p> <p>a processor operatively connected to at least one of said plurality of receiver/distributors for receiving the programming and the programming identification information; and</p> <p>a controller operatively connected to said processor for receiving specific unit programming identification information, identifying a specific unit of television programming received at a specific receiver/distributor by comparing of received identification information to previously received scheduled program identification information, and passing programming to either said output device or to said storage device based upon said scheduled information.</p>
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Claim 80 recites methods for accomplishing certain steps in the operating environment of a receiver station, i.e., an interactive video apparatus. This differentiates claim 80 over the patented claim's recitations of elements of an apparatus.

Application Claim 85	U.S. Pat. No. 5,335,277, Claim 14
<p>85. A method of processing a plurality of signals in a system including a transmission station and a receiver station, wherein said receiver station is remote from said transmission station, said method comprising the steps of:</p> <p><u>programming said receiver station to store user data;</u></p> <p><u>inputting said plurality of signals to said transmission station;</u></p> <p><u>inputting a transmission schedule associated with said plurality of signals, said transmission schedule identifying a specific schedule for each of said plurality of signals, each said specific schedule designating for one of said plurality of signals at least two of:</u></p> <p><u>a transmission time;</u></p> <p><u>one of a transmission frequency and an output network; and</u></p> <p><u>an identifier;</u></p> <p><u>transmitting one of said plurality of signals in accordance with said transmission schedule;</u></p> <p><u>causing said receiver station to store one of said plurality of signals based on said user data.</u></p>	<p>14. A television receiver station comprising:</p> <p>a plurality of receiver/distributors with at least one receiving a television programming transmission, each transmission including the television programming and programming identification signals identifying the programming;</p> <p>an output device for displaying television programming or transmitting television programming to a remote subscriber station;</p> <p>a storage device for receiving and storing television programming;</p> <p>means for selectively receiving television programming from either one of said receiver/distributors or said storage device and selectively transferring the received television programming to either said storage device or to said output device;</p> <p>a processor operatively connected to at least one of said plurality of receiver/distributors for receiving the programming and the programming identification information; and</p> <p>a controller operatively connected to said processor for</p>

	receiving specific unit programming identification information, identifying a specific unit of television programming received at a specific receiver/distributor by comparing of received identification information to previously received scheduled program identification information, and passing programming to either said output device or to said storage device based upon said scheduled information.
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Claim 85 recites methods for accomplishing certain steps in the operating environment of a receiver station, i.e., an interactive video apparatus. This differentiates claim 85 over the patented claim's recitations of elements of an apparatus.

Application Claim 87	U.S. Pat. No. 5,335,277, Claim 14
<p>87. <u>A method of communicating a plurality of signals in a network, said network including a transmission station and a remote receiver station, said method comprising the steps of:</u> <u>inputting said plurality of signals at said transmission station;</u> <u>inputting a communication schedule associated with said plurality of signals, said communication schedule designating for each signal of said plurality of signals at least two of:</u> <u>a transmission time;</u> <u>one of a transmission frequency and an output network;</u> <u>and</u> <u>a designation code;</u> <u>communicating each signal of said plurality of signals in accordance with said communication schedule;</u> <u>inputting a portion of said plurality of signals to a computer at a time when specific information content does not exist;</u> <u>generating said specific information content in response to said inputted portion of said plurality of signals; and</u> <u>causing said receiver station to output said specific information content.</u></p>	<p>14. A television receiver station comprising: a plurality of receiver/distributors with at least one receiving a television programming transmission, each transmission including the television programming and programming identification signals identifying the programming; an output device for displaying television programming or transmitting television programming to a remote subscriber station; a storage device for receiving and storing television programming; means for selectively receiving television programming from either one of said receiver/distributors or said storage device and selectively transferring the received television programming to either said storage device or to said output device; a processor operatively connected to at least one of said plurality of receiver/distributors for receiving the programming and the programming identification information; and a controller operatively connected to said processor for receiving specific unit programming identification information, identifying a specific unit of television programming received at a specific receiver/distributor by comparing of received identification information to previously received scheduled program identification information, and passing programming to either said output device or to said storage device based upon said scheduled information.</p>

Claim 87 recites methods for accomplishing certain steps in the operating environment of a receiver station, i.e., an interactive video apparatus. This differentiates claim 87 over the patented claim's recitations of elements of an apparatus.

Application Claim 88	U.S. Pat. No. 5,335,277, Claim 14
<p>88. <u>A method of generating information content in a network, said network including a transmission station and a receiver station, said receiver station being remote from said transmitter station, said method comprising the steps of:</u></p>	<p>14. A television receiver station comprising: a plurality of receiver/distributors with at least one receiving a television programming transmission, each transmission including the television programming and</p>

<p><u>inputting a control signal at said transmission station;</u> <u>inputting a schedule associated with said control signal,</u> <u>said schedule designating two of:</u> <u>a transmission time;</u> <u>one of a transmission frequency and an output network;</u> <u>and</u> <u>an identifier;</u> <u>communicating said control signal in accordance with</u> <u>said schedule at a time when information content does not</u> <u>exist;</u> <u>inputting said control signal to a computer based on said</u> <u>step of communicating;</u> <u>generating said information content in response to said</u> <u>control signal, said information content including one of</u> <u>video and a graphic; and</u> <u>causing a signal generator one of to add one of said</u> <u>control signal and said generated information content to an</u> <u>output containing television programming at said</u> <u>transmission station and to add said generated information</u> <u>content to an output containing television programming at</u> <u>said receiver station.</u></p>	<p>programming identification signals identifying the programming; an output device for displaying television programming or transmitting television programming to a remote subscriber station; a storage device for receiving and storing television programming; means for selectively receiving television programming from either one of said receiver/distributors or said storage device and selectively transferring the received television programming to either said storage device or to said output device; a processor operatively connected to at least one of said plurality of receiver/distributors for receiving the programming and the programming identification information; and a controller operatively connected to said processor for receiving specific unit programming identification information, identifying a specific unit of television programming received at a specific receiver/distributor by comparing of received identification information to previously received scheduled program identification information, and passing programming to either said output device or to said storage device based upon said scheduled information.</p>
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Claim 88 recites methods for accomplishing certain steps in the operating environment of a receiver station, i.e., an interactive video apparatus. This differentiates claim 88 over the patented claim's recitations of elements of an apparatus.

Application Claim 93	U.S. Pat. No. 4,704,725, Claim 3
<p>93. <u>A method of processing signals in a network</u> <u>including a transmitter station and a user station, said user</u> <u>station having a processor, said method comprising the steps</u> <u>of:</u></p> <p><u>inputting a plurality of signals at said transmitter station,</u> <u>said plurality of signals including a programming signal and</u> <u>a processor instruction;</u> <u>inputting a schedule associated with said plurality of</u> <u>signals, said schedule including a designation for each of</u> <u>said plurality of signals of at least two of:</u> <u>a transmission time;</u> <u>one of a transmission frequency and an output network;</u> <u>and</u> <u>an identifier;</u> <u>communicating said programming signal in accordance</u> <u>with said schedule;</u> <u>receiving said plurality of signals at said user station and</u> <u>outputting programming contained in said programming</u></p>	<p>3. A method of communicating data to a multiplicity of receiver stations each of which includes a computer adapted to generate and transmit user specific signals to one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify the user specific signals transmitted to their associated output devices, each of said computers being programmed to accommodate a special user application, comprising the steps of: transmitting an instruct-to-transmit signal to said computers at a time when the corresponding user specific information is not being transmitted to an output device, detecting the presence of said instruct-to-transmit signal at selected receiver stations and coupling said instruct-to-transmit signal to the computers associated with said selected stations, and causing said last named computers to generate and transmit their user specific signals to their associated output devices in response to said instruct-to-transmit signal, thereby to transmit to the selected output devices an output signal comprising said data and said related user specific signals, the output signals at a multiplicity of said output devices being different, with each output signal specific to a</p>

<p>signal; inputting a user response to information contained in said programming signal; and processing said user response in accordance with said processor instruction.</p>	<p>specific user.</p>
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Application Claim 98	U.S. Pat. No. 4,704,725, Claim 3
<p>98. A method of processing a plurality of signals in a system, wherein said system includes a transmission station and a receiver station, said receiver station being remote from said transmitter station, said method comprising the steps of:</p> <p>inputting to said system said plurality of signals, wherein said plurality of signals includes multimedia signals, wherein said multimedia signals include one of video programming and audio programming and one of computer programming and programming to be printed; inputting said multimedia signals to one of a switch and a processor at said transmission station; controlling said one of a switch and a processor to communicate said multimedia signals to said receiver station according to a timing instruction; determining one of a programming kind and subject matter contained in said multimedia signals; delaying one of processing and communication of a portion of said multimedia signals; and outputting a multimedia presentation based on said multimedia signals.</p>	<p>3. A method of communicating data to a multiplicity of receiver stations each of which includes a computer adapted to generate and transmit user specific signals to one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify the user specific signals transmitted to their associated output devices, each of said computers being programmed to accommodate a special user application, comprising the steps of:</p> <p>transmitting an instruct-to-transmit signal to said computers at a time when the corresponding user specific information is not being transmitted to an output device, detecting the presence of said instruct-to-transmit signal at selected receiver stations and coupling said instruct-to-transmit signal to the computers associated with said selected stations, and causing said last named computers to generate and transmit their user specific signals to their associated output devices in response to said instruct-to-transmit signal, thereby to transmit to the selected output devices an output signal comprising said data and said related user specific signals, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.</p>

Application Claim 103	U.S. Pat. No. 4,965,825, Claim 1
<p>103. A method of processing signals in a network, said network including a transmitter station and a receiver station, said method comprising the steps of:</p> <p>inputting a plurality of signals to one of a switch and a computer at said transmitter station, wherein said plurality of signals include multimedia signals, each of said multimedia signals including at least one of video, audio and data programming; controlling said one of a switch and a computer to communicate said plurality of signals to said receiver station in accordance with a timing instruction; decrypting one of said plurality of signals; passing said plurality of signals selectively to a processor at said receiver station; and outputting a multimedia presentation at said receiver station based on said multimedia signals.</p>	<p>1. In a signal processor system,</p> <p>carrier transmission receiving means; means for demodulating said carrier transmission to detect an information transmission thereon; detector means for detecting an embedded signal in the information transmission and removing it from said information transmission; first control means responsive to said detected signal to activate and/or deactivate equipment external to said signal processor system; second control means activated by said detected signal to monitor the performance and/or output of said first control means; a recorder means for receiving and recording data collected by said monitor means; and control means for instructing said recorder to direct information recorded thereon to a remote site.</p>

Claim 103 recites methods for accomplishing certain steps in the operating environment of a receiver station, i.e., an interactive video apparatus. This differentiates claim 103 over the patented claim's recitations of elements of an apparatus.

Application Claim 108	U.S. Pat. No. 4,694,490, Claim 1
<p>108. <u>A method of processing signals in a network, said network including a transmitter station and a receiver station, said method comprising the steps of:</u></p> <p><u>inputting a plurality of signals to one of a switch and a computer at said transmitter station, wherein said plurality of signals includes two of video, audio and data programming;</u></p> <p><u>controlling said one of a switch and a computer to communicate said plurality of signals to said receiver station in accordance with a timing instruction;</u></p> <p><u>passing said plurality of signals selectively to a processor at said receiver station;</u></p> <p><u>controlling said processor on the basis of information contained in said plurality of signals; and</u></p> <p><u>outputting a multimedia presentation at said receiver station based on said step of controlling said processor.</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,</p> <p>transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,</p> <p>receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,</p> <p>detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and</p> <p>causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>

Application Claim 119	U.S. Pat. No. 4,704,725, Claim 3
<p>119. <u>A method of processing multimedia signals in a network including a transmission station and a receiver station, said receiver station having storage capacity for storing multimedia programming, said storage capacity including two of an optical disk player, a video recorder/player, and a computer, said method comprising:</u></p> <p><u>inputting to said network a plurality of signals, wherein at least two of said plurality of signals are multimedia signals, each of said multimedia signals including one of video, audio and data programming, said multimedia signals</u></p>	<p>3. A method of communicating data to a multiplicity of receiver stations each of which includes a computer adapted to generate and transmit user specific signals to one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify the user specific signals transmitted to their associated output devices, each of said computers being programmed to accommodate a special user application, comprising the steps of:</p> <p>transmitting an instruct-to-transmit signal to said computers at a time when the corresponding user specific information is not being transmitted to an output device,</p> <p>detecting the presence of said instruct-to-transmit signal at</p>

<p><u>further including an embedded identifier;</u> <u>inputting said plurality of signals to a switch and a processor at said transmission station;</u> <u>controlling said switch to communicate said plurality of signals to said receiver station according to timing instructions;</u> <u>identifying programming inputted to said switch;</u> <u>communicating an instruct-to-coordinate signal to said receiver station;</u> <u>delaying at least one of processing and communication of said multimedia signals in response to one of said instruct-to-coordinate signal and programming stored at said processor; and</u> <u>presenting multimedia programming at said receiver station at one of a specific time and a specific place in response to said instruct-to-coordinate signal, said multimedia programming contained in said multimedia signals.</u></p>	<p>selected receiver stations and coupling said instruct-to-transmit signal to the computers associated with said selected stations, and causing said last named computers to generate and transmit their user specific signals to their associated output devices in response to said instruct-to-transmit signal, thereby to transmit to the selected output devices an output signal comprising said data and said related user specific signals, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.</p>
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Application Claim 120	U.S. Pat. No. 4,704,725, Claim 1
<p>120. A method of processing signals to enable a plurality of receiver stations to function in different fashions, each of said plurality of receiver stations having a processor, said method comprising the steps of:</p> <p><u>receiving an information transmission and communicating said information transmission to a storage device;</u> <u>receiving a signal which is operative to cause each of said plurality of receiver stations to identify and process a portion of said information transmission, wherein said plurality of receiver stations one of process a portion of said information transmission in different fashions and process different portion of said information transmission;</u> <u>selecting one of the group consisting of:</u> <u>a time at which to communicate said signal; and</u> <u>a storage location to which to communicate said signal;</u> <u>communicating said signal one of at a selected time and to a selected storage location based on said step of selecting; and</u> <u>storing said information transmission and said signal at said storage device,</u> <u>wherein said method processes signals to enable said plurality of receiver stations to function in different fashions.</u></p>	<p>1. A method of communicating data to a multiplicity of receiver stations, each of which includes a computer adapted to generate and transmit user specific signals to one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify the user specific signals transmitted to their associated output devices, each of said computers being programmed to accommodate a special user application, comprising the steps of:</p> <p>transmitting an instruct-to-process signal to said computers to cause each of said computers to process data in accordance with its associated special user application, transmitting an instruct-to-output signal to said computers at a time when the corresponding user specific information is not being transmitted to an output device, detecting the presence of said instruct-to-output signal at selected receiver stations and coupling said instruct-to-output signal to the computers associated with said selected stations, and causing said last named computers simultaneously to output their user specific signals to their associated output devices in response to said instruct-to-output signal, thereby to transmit to the selected output devices an output signal comprising said data and said related user specific signals, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.</p>

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APPENDIX C

CORRELATION CHARTS

BETWEEN

THE PARENT 1981 SPECIFICATION

(as referenced to column and line numbers of U.S. Pat. No. 4,694,490)

AND

THE INSTANT 1987 PRIORITY SPECIFICATION

I. COLUMN I

Column I lines 1-22.	<p>SIGNAL PROCESSING APPARATUS AND METHODS BACKGROUND OF THE INVENTION</p> <p>At the present time, vast amounts of programming are transmitted through various media throughout the United States which programming is handled with significant degrees of manual processing as different, discrete units of programming transmitted on single channel systems. Broadcasters and cablecasters transmit programming with the expectation that viewers in one place tune to only one channel at a time.</p> <p>On occasion and on a limited scale, the co-ordination of two media and two channels has occurred. Such co-ordination has taken the form of stereo simulcasts where one local television station broadcasts a program, generally of classical music, and simultaneously, a local radio station broadcasts the same music in stereo. But such simulcasts require significant degrees of manual processing at both the points of origination and reception.</p>	Page 7 lines 7-12.	[The prior art] has no capacity for coordinating the programming content transmitted by any given peripheral system with any other programming transmitted to a television receiver. It has no capacity for controlling two separate systems such as, for example, an automatic radio and television stereo simulcast.
Column I lines 23-28.	<p>Today great potential exists for a significant increase in the scope and scale of multimedia and multichannel presentations. This increase is desirable because it will increase variety and add substantially to the richness of presentations as regards both entertainment and the communications of ideas and information.</p>	Page 2 lines 20-23.	Unlocking this potential is desirable because these new media will add substantial richness and variety to the communication of ideas, information and entertainment.
Column I lines 29-35.	<p>This potential arises out of two simultaneous, independent trends. One is the development and growth of the so-called cable television industry whose member companies deliver locally not one but many channels of programming. The other is the widespread and growing ownership of computers, especially microcomputers in homes.</p>	Page 2 lines 8-11.	Today great potential exists for combining the capacity of broadcast communications media to convey ideas with the capacity of computers to process and output user specific information.
Column I lines 36-41.	<p>It is the object of this invention to unlock this potential by the development of means and methods which permit programming to communicate with equipment that is external to television and radio receivers, particularly computers and computer peripherals such as printers.</p>	Page 3 lines 30-33, Page 2 line 25 to page 3 line 8.	<p>It is the object of this invention to unlock this great potential in the fullest measure by means of an integrated system of programming communication that joins together all these capacities most efficiently.</p> <p>To unlock this potential fully requires means and methods for combining and controlling receiver systems that are now separate--television and computers, radio and computers, broadcast print and computers, television and computers and broadcast print, etc.</p>

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
			<p>But it requires much more.</p> <p>To unlock this potential fully requires a system with efficient capacity for satisfying the demands of subscribers who have little receiver apparatus and simple information demands as well as subscribers who have extensive apparatus and complex demands. It requires capacity for transmitting and organizing vastly more information and programming than any one-channel transmission system can possibly convey at one time. It requires capacity for controlling intermediate transmission stations that receive information and programming from many sources and for organizing the information and programming and retransmitting the information and programming so as to make the use of the information and programming at ultimate receiver stations as efficient as possible.</p>
Column 1 lines 42-44	It is the further purpose of this invention to provide means and methods to process and monitor such transmissions and presentations at individual receiver sites...	Page 3 lines 9-29.	<p>To unlock this potential also requires efficient capacity for providing reliable audit information to (1) advertisers and others who pay for the transmission and performance of programming and (2) copyright holders, pay service operators, and others such as talent who demand, instead, to be paid. This requires capacity for identifying and recording (1) what television, radio, data, and other programming and what instruction signals are transmitted at each transmission station and (2) what is received at each receiver station as well as (3) what received programming is combined or otherwise used at each receiver station and (4) how it is received, combined, and/or otherwise used.</p> <p>Moreover, this system must have the capacity to ensure that programming supplied for pay or for other conditional use is used only in accordance with those conditions. For example, subscriber station apparatus must display the commercials that are transmitted in transmissions that advertisers pay for. The system must have capacity for decrypting, in many varying ways, programming and instruction signals that are encrypted and for identifying those who pirate programming and inhibiting piracy.</p>
Column 1 lines 45-49.	...and to control, in certain ways, the use of transmitted programming and the operation of certain associated equipment. Such receiver sites may be stations or systems that intend to retransmit the programming, or they may be end users of the programming.	Page 11 lines 23-27.	<p>It is the further purpose of this invention to provide means and methods whereby a simplex point-to-multipoint transmission (such as a television or radio broadcast) can cause simultaneous generation of user specific information at a plurality of subscriber stations.</p>
Column 1 lines 49-53.	The present invention contemplates that certain data may be	Page 13 lines 5-9.	In the present invention, certain monitored signals may be

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
Column 1 lines 54-57.	<p>encrypted and that certain data collected from such processing and monitoring will automatically be transferred to a remote geographic location or locations.</p> <p>In the prior art, there have been attempts to develop systems to control programming and systems to monitor programming, but the two have been treated as separate systems, and each has had limited capacity.</p>	<p>Page 2 lines 25-30.</p>	<p>encrypted, and certain data collected from such monitoring may be automatically transferred from subscriber stations to one or more remote geographic stations.</p> <p>To unlock this potential fully requires means and methods for combining and controlling receiver systems that are now separate--television and computers, radio and computers, broadcast print and computers, television and computers and broadcast print, etc.</p>
<p>Column 1 line 58 to column 2 line 27.</p>	<p>As regards control systems, cueing systems and equipment now exist that transmit instructions to operating equipment at receiver sites by means of tone signals that are carried, in television transmissions, in the audio portion and may be heard by the human ear. Such systems and devices are used to turn on equipment such as videotape players and recorders that have been manually loaded and to tell such equipment how long to run. Such systems operate by transmitting operating signals that precede and follow programming and are called "headers" and "trailers" respectively. The use of headers and trailers limits prior art in that headers and trailers can become separated from programming, thereby hampering automatic operations. Such prior art techniques have lacked the capacity to process the programming in various ways including to instruct receiver end equipment what specific programming to select to play or record other than that immediately at hand, how to load it on player or recorder equipment, when and how to play it or record it other than immediately, how to modify it, what equipment or channel or channels to transmit it on, when to transmit it, and how and where to file it or refile it or dispose of it. (Within television studios that are original transmitters of programming, certain systems and equipment do exist for certain automatic co-ordination of players, loaders, and other equipment; however, manual instructions still must be given, on site, for the co-ordination of such equipment which instructions are transmitted electronically on hard-wire channels that are strictly separate from the channels on which the programming is transmitted and such instructions are never broadcast.) Such prior art systems and equipment have lacked the capacity to automatically coordinate multi-channel and multi-media presentations. They have lacked the capacity to decrypt encrypted processing signals. They have lacked the capacity to monitor whether receiver-end equipment are following</p>	<p>Generally, page 4 line 17 to page 7 line 22.</p>	<p>This prior art is limited. It only transmits data; it does not control data processing. No system is preprogrammed to simultaneously control a plurality of central processor units, operating systems, and pluralities of computer peripheral units. None has capacity to cause simultaneous generation of user specific information at a plurality of receiver stations. None has any capacity to cause subscriber station computers to process received data, let alone in ways that are not inputted by the subscribers. None has any capacity to explain automatically why any given information might be of particular interest to any subscriber or why any subscriber might wish to select information that is not selected or how any subscriber might wish to change the way selected information is processed.</p> <p>...</p> <p>This prior art, too, is limited. It has no capacity to overlay any information other than information transmitted to all receiver stations simultaneously. It has no capacity to overlay any such information except in the order in which it is received. It has no capacity to cause receiver station computers to generate any information whatsoever, let alone user specific information. It has no capacity to cause overlays to commence or cease appearing at receiver stations, let alone commence and cease appearing periodically.</p> <p>As regards the automation of intermediate transmission stations, various so-called "cueing" systems in the prior art operate in conjunction with network broadcast transmissions to automate the so-called "cut-in" at local television and radio stations of locally originated programming such as so-called "local spot" advertisements.</p> <p>...</p> <p>This prior art, too, is limited. It has no capacity to schedule automatically or transmit any programming other than that loaded immediately at the play heads of the controlled video</p>

instructions properly.		<p>players. It has no capacity to load the video players or identify what programming is loaded on the players or verify that scheduled programs are played correctly. It has no capacity to cause the video players to record programming from any source. It has no capacity to receive programming transmissions or process received transmissions in any way. It has no capacity to operate under the control of instructions transmitted by broadcasters. It has no capacity to insert signals that convey information to or control, in any way, the automatic operation of ultimate receiver station apparatus other than television receivers.</p> <p>... This prior art, too, is limited. It has no capacity for interconnecting or operating a system at any time other than the time when the order to do so is entered manually at the system or remote keyboard. It has no capacity for acting on instructions transmitted by broadcasters to interconnect, actuate or tune systems peripheral to a television receiver or to actuate a television receiver or automatically change channels received by a receiver. It has no capacity for coordinating the programming content transmitted by any given peripheral system with any other programming transmitted to a television receiver. It has no capacity for controlling two separate systems such as, for example, an automatic radio and television stereo simulcast. It has no capacity for selectively connecting radio receivers to radio peripherals such as computers or printers or speakers or for connecting computers to computer peripherals (except perhaps a television set). It has no capacity for controlling the operation of decryptors or selectively inputting transmissions to decryptors or outputting transmissions from decryptors to other apparatus. It has no capacity for monitoring and maintaining records regarding what programming is selected or played on any apparatus or what apparatus is connected or how connected apparatus operate.</p>
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II. COLUMN 2

Column 2 lines 28-62.	As regards monitoring systems, various systems and devices have been developed to determine what programming is played on television. One such system for monitoring programs is described in U.S. Patent to Haselwood, et al. No. 4,025,851. Another that monitors by means of audio	Generally page 7 line 23 to page 9 line 5.
	The prior art includes a variety of systems for monitoring programming and generating so-called "ratings." One system that monitors by means of embedded digital signals is described in U.S. Patent to Haselwood, et al. No. 4,025,851. Another that monitors by means of audio codes that are only	

codes that are only "substantially inaudible" is described in U.S. Patent to Crosby No. 3,845,391. Recently devices, called addressable converters, have been developed that facilitate so-called pay-per-view marketing of programming by monitoring what individual television receivers tune to and either permitting or preventing the tuners to tune to given frequencies satisfactorily. Such prior art techniques and equipment have been limited to monitoring single broadcast stations, channels or units and have lacked the ability to monitor multimedia presentations. They have been able to monitor only the audio or the video portion of television transmissions. They have been able either to monitor what is transmitted over one channel or what is received by one or more receivers but not both. They have lacked the capacity to record and transfer information simultaneously. They have been unable to decrypt encrypted signals. They have been able to monitor only single signal word types or word lengths that are placed, within the transmissions, in locations that are unvarying and unvariable. They have lacked the capacity to compare, assemble, and/or evaluate multi-word, multi-location signals. Except in the possible case of addressable converters, they have been unable to distinguish the absence of signals or signal words in transmissions. They have lacked the capacity to communicate processing instructions to external equipment as described in the paragraph above. It is the object of the present invention to overcome these and other deficiencies of the prior art.

"substantially inaudible" is described in U.S. Patent to Crosby No. 3,845,391. A third that automatically monitors a plurality of channels by switching sequentially among them and that includes capacity to monitor audio and visual quality is described in U.S. Patent to Greenberg No. 4,547,804.

This prior art, too, is limited. It has capacity to monitor only single broadcast stations, channels or units and lacks capacity to monitor more than one channel at a time or to monitor the combining of media. At any given monitor station, it has had capacity to monitor either what is transmitted over one or more channels or what is received on one or more receivers but not both. It has assumed monitored signals of particular format in particular transmission locations and has lacked capacity to vary formats or locations or to distinguish and act on the absence of signals or to interpret and process in any fashion signals that appear in monitored locations that are not monitored signals. It has lacked capacity to identify encrypted signals then decrypt them. It has lacked capacity to record and also transfer information to a remote geographic location simultaneously.

As regards recorder/player systems, many means and methods exist in the prior art for recording television or audio programming and/or data on magnetic, optical or other recording media and for retransmitting prerecorded programming. Video tape recorders have capacity for automatic delayed recording of television transmissions on the basis of instructions input manually by viewers. So-called "interactive video" systems have capacity for locating prerecorded television programming on a given disc and transmitting it to television receivers and locating prerecorded digital data on the same disc and transmitting them to computers.

This prior art, too, is limited. It has no capacity for automatically embedding signals in and/or removing embedded signals from a television transmission then recording the transmission. It has no capacity for controlling the connection or actuation or tuning of external apparatus. It has no capacity for retransmitting prerecorded programming and controlling the decryption of said programming, let alone doing so on the basis of signals that are embedded in said programming that contain keys for the decryption of said programming. It has no capacity for

1987 Spec Reference	1987 Language	1987 Spec Reference	1987 Language
			operating on the basis of control signals transmitted to recorder/players at a plurality of subscriber stations, let alone operating on the basis of such signals to record user specific information at each subscriber station.
Column 2 lines 63-64.	(The term "signal unit" hereinafter means one complete instruction or information message unit.	Page 14 lines 26-27.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit.
Column 2 lines 65-66.	Examples of signal units are a unique code identifying a programming unit,...	Page 14 lines 27-29.	Examples of signal units are a unique code identifying a programming unit,
Column 2 lines 66-67.	...or a unique purchase order number identifying the proper use of a programming unit,...	Page 14 lines 27-30.	Examples of signal units are...a unique purchase order number identifying the proper use of a programming unit, or ...
Column 2 line 67 to column 3 line 3.	...or a general instruction identifying whether a programming unit is to be retransmitted immediately or recorded for delayed transmission.	Page 14 lines 27-32.	Examples of signal units are...a general instruction identifying whether a programming unit is to be retransmitted immediately or recorded for delayed transmission.

III. COLUMN 3

Column 3 lines 3-5.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission.	Page 14 lines 32-35.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission.
Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
Column 3 lines 8-12.	Such strings may or may not have predetermined data bits to identify the beginnings and ends of words. Signal words may contain parts of signal units, whole signal units, or groups of partial or whole signal units or combinations.)	Page 15 lines 2-6.	Such strings may or may not have predetermined data bits to identify the beginnings and ends of words. Signal words may contain parts of signal units, whole signal units, or groups of partial or whole signal units or combinations.)
Column 3 lines 13-27.	It is a further object of the present invention to process and monitor signals on numerous channels by sequentially scanning each channel in a predetermined manner which manner may be varied. It is also an object of the present invention to prevent unauthorized use of signals and programming by permitting signal encryption, the variation of word numbers, word lengths, word compositions, and/or word locations. It is also an object of this system to process different signal words in different ways. It is also an object of the present invention to provide a record of signals that may be transferred to a geographically distant location on command or predetermined instruction.	Page 3 lines 21-21\9.	Moreover, this system must have the capacity to ensure that programming supplied for pay or for other conditional use is used only in accordance with those conditions. For example, subscriber station apparatus must display the commercials that are transmitted in transmissions that advertisers pay for. The system must have capacity for decrypting, in many varying ways, programming and instruction signals that are encrypted and for identifying those who pirate programming and inhibiting piracy.

1987 Language	1987 Spec Reference	1987 Language	Appendix C
Column 3 line 29.	SUMMARY OF THE INVENTION		SUMMARY OF THE INVENTION
Column 3 lines 30-31.	The present invention consists of methods and apparatus with several forms.	See generally page 11 line 4 to page 14 line 30. Page 16 lines 15-27.	A central objective of the present invention is to provide flexibility in regard to installed station apparatus. At any given time, the system must have capacity for wide variation in individual station apparatus in order to provide individual subscribers the widest range of information options at the least cost in terms of installed equipment. Flexibility must exist for expanding the capacity of installed systems by means of transmitted software and for altering installed systems in a modular fashion by adding or removing components. Flexibility must exist for varying techniques that restrict programming to duly authorized subscribers in order to identify and deter pirates ...
Column 3 lines 32-37.	One method provides a technique whereby a broadcast or cablecast transmission facility can duplicate the operation of a television studio automatically through the use of instruction and information signals embedded in programming either supplied from a remote source or sources or prerecorded.	Page 12 lines 18-24. Page 11 lines 16-19.	It is the further purpose of this invention to provide means and methods for the automation of intermediate transmission stations that receive and retransmit programming. The programming may be delivered by any means including over-the-air, hard-wire, and manual means. The stations may transmit programming over-the-air (hereinafter, "broadcast") or over hard-wire (hereinafter, "cablecast").
Column 3 lines 37-39.	The programming may be delivered to the transmission facility by any means including broadcast, hard-wire, and manual means.	Page 12 lines 21-24.	... the present invention has capacity for transmitting data and control instructions in the same information stream to many different apparatus at a given subscriber station, for causing computers to generate and transmit programming, ...
Column 3 lines 39-41.	The transmission facility may transmit a single channel or multiple channels of programming.	Page 12 lines 25.	The programming may be delivered by any means including over-the-air, hard-wire, and manual means. The stations may transmit programming over-the-air (hereinafter, "broadcast") or over hard-wire (hereinafter, "cablecast"). They may transmit single channels or multiple channels.
Column 3 lines 41-45.	The method includes a monitoring technique to construct a record for each transmitted channel that duplicates the log that the Federal Communications Commission requires broadcast station operators to maintain.	Page 12 lines 25-29.	The present invention includes capacity for automatically constructing records for each transmitted channel that duplicate the logs that the Federal Communications Commission requires broadcast station operators to maintain.
Column 3 lines 45-47.	The method permits the transfer of such records to a predetermined site or sites in a predetermined fashion or fashions.	Page 337 lines 19-21	And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively.
Column 3 lines 48-51.	Another method has application at receiver sites such as private homes or public places like theaters, hotels, brokerage	Page 12 lines 30-35.	It is the further purpose of this invention to provide means and methods for the automation of ultimate receiver stations,

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
	offices, etc., whether commercial establishments or not.		... Such ultimate receiver stations may be private homes or offices or commercial establishments such as theaters, hotels, or brokerage offices.
Column 3 lines 51-56.	This method provides techniques whereby, automatically, single channel, single medium presentations, be they television, radio, or other electronic transmissions, may be recorded, co-ordinated in time with other programming previously transmitted and recorded, or processed in other fashions.	Page 12 lines 30-33. Page 2 lines 8-19.	It is the further purpose of this invention to provide means and methods for the automation of ultimate receiver stations, especially the automation of combined medium and multi-channel presentations. Today great potential exists for combining the capacity of broadcast communications media to convey ideas with the capacity of computers to process and output user specific information. One such combination would provide a new radio-based or broadcast print medium with the capacity for conveying general information to large audiences--e.g., "Stock prices rose today in heavy trading,"--with information of specific relevance to each particular user in the audience--e.g., "but the value of your stock portfolio went down." (Hereinafter, the new media that result from such combinations are called "combined" media.) ... methods for combining and controlling receiver systems that are now separate--television and computers, radio and computers, broadcast print and computers, television and computers and broadcast print, etc.
		Page 13 lines 10-13.	It is a further purpose of this invention to provide means and methods for recording combined media and/or multi-channel programming and for playing back prerecorded programming of such types.
Column 3 lines 56-60.	Multimedia presentations may be co-ordinated in time and/or in place as, for example, when real-time video programming is co-ordinated with presentations from a microcomputer working with data supplied earlier.	Page 12 lines 3-9. Page 2 lines 8-19.	It is the further purpose of this invention to provide means and methods whereby a simplex broadcast transmission can cause periodic combining of relevant user specific information and conventional broadcast programming simultaneously at a plurality of subscriber stations, thereby integrating the broadcast information with each user's own information. Today great potential exists for combining the capacity of broadcast communications media to convey ideas with the capacity of computers to process and output user specific information. One such combination would provide a new radio-based or broadcast print medium with the capacity for conveying general information to large audiences--e.g.,

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
Appendix C			
			"Stock prices rose today in heavy trading,"--with information of specific relevance to each particular user in the audience--e.g., "but the value of your stock portfolio went down." (Hereinafter, the new media that result from such combinations are called "combined" media.)
Column 3 lines 60-66.	This method provides techniques whereby the timing and fashion of the playing, processing, and co-ordination of a presentation or presentations may be determined at the time and place of transmission or of presentation, either in whole or in part, either locally or remotely, or a combination of these factors.	Page 28 lines 2-3. Page 11 lines 23-31.	This television based combined medium is but one example of many combined media. It is the further purpose of this invention to provide means and methods whereby a simplex point-to-multipoint transmission (such as a television or radio broadcast) can cause simultaneous generation of user specific information at a plurality of subscriber stations. One advantage of the present invention is great ease of use. For example, as will be seen, a subscriber can cause his own information to be processed in highly complex ways by merely turning his television receiver on and tuning to a particular channel.
Column 3 line 66 to column 4 line 2.	The method provides monitoring techniques to develop data on patterns of viewership and to permit the determination of specific usage at individual receiving sites for various purposes including, for example, the billing of individual customers.	Page 450 lines 27-35. Page 13 lines 1-9. Page 28 lines 29-35.	(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.) It is the further purpose of this invention to provide means and methods for identifying and recording what television, radio, data, and other programming is transmitted at each transmission station, what programming is received at each receiver station, and how programming is used. In the present invention, certain monitored signals may be encrypted, and certain data collected from such monitoring may be automatically transferred from subscriber stations to one or more remote geographic stations. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming

availability and usage.

IV. COLUMN 4

Column 4 lines 2-4.	The method provides techniques whereby unauthorized use of programming and/or of signals may be prevented.	Page 13 lines 14-17.	It is a further purpose of this invention to provide a variety of means and methods for restricting the use of transmitted communications to only duly authorized subscribers.
Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.	The present invention employs signals embedded in programming.
Column 4 line 6.	The advantage of such embedded signals...	Page 13 line 26.	Embedded signals provide several advantages.
Column 4 lines 6-9.	...as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing...	Page 13 lines 27-28.	They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.
Column 4 lines 9-12.	...that they can convey signals to equipment that must switch manners or modes of operation during transmissions of individual units of programming...	Page 13 lines 28-31.	They occur at precise times in programming and can synchronize the operation of receiver station apparatus to the timing of programming transmissions.
Column 4 lines 12-13.	...and that they can be monitored.	Page 13 lines 31-32.	They can be conveniently monitored.
Column 4 lines 13-14.	(The techniques described here may use headers and trailers from time to time.)	Page 344 line 33 to page 345 line 14.	Separating the transmission of the end of each program unit and the commencement of the succeeding unit is a brief interval of time. Before transmitting the first program unit and, subsequently, in each one of said intervals, said distribution station transmits a SPAM message that contains execution and meter-monitor segments. Each message contains the same execution segment information that is addressed to ITS computers, 73, and instructs each computer, 73, to identify the information in the meter-monitor segment of said message, to compare said "code" information to the preprogrammed schedule information of said computer, 73, and if a match results, to select and record the programming of the program unit that follows said message, or if no match results, to not select and not record said programming. Each message contains meter-monitor "program unit identification code" information of the program unit that immediately follows.
Column 4 lines 14-17.	The embedded signals may run and repeat continuously throughout the programming or they may run only occasionally or only once.	Page 14 lines 3-5.	In programming transmissions, given signals may run and repeat, for periods of time, continuously or at regular intervals. Or they may run only occasionally or only once.
Column 4 lines 17-18.	They may appear in various and varying locations.	Page 14 line 6.	They may appear in various and varying locations.
Column 4 lines 18-22.	In television they may appear on one line in the video portion of the transmission, or on a portion of one line, or on more than one line, and will probably lie outside the range of the television picture displayed on a normally tuned television set.	Page 14 lines 6-11.	In television they may appear on one line in the video portion of the transmission such as line 20 of the vertical interval, or on a portion of one line, or on more than one line, and they will probably lie outside the range of the television picture

1987 Spec Reference	1987 Language	1987 Spec Reference	1987 Language
Column 4 lines 22-25.	In television and radio they may appear in a portion of the audio range that is not normally rendered in a form audible to the human ear.	Page 14 lines 11-14.	displayed on a normally tuned television set.
Column 4 lines 25-26.	In television audio, they are likely to lie between eight and fifteen kilohertz.	Page 14 lines 14-15.	In television and radio they may appear in a portion of the audio range that is not normally rendered in a form audible to the human ear.
Column 4 lines 26-28.	Signals may also be transmitted on frequencies outside the ranges of television and radio.	Page 14 lines 15-17.	In television audio, they are likely to lie between eight and fifteen kilohertz.
		Page 463 lines 10-29.	In broadcast print and data communications transmissions, the signals may accompany conventional print or data programming....
			(To minimize the risk that program instruction sets may become separated from their associated television programming, said sets are normally embedded in their associated television transmissions. But it is not an absolute requirement of the preferred embodiment that all program instruction sets be so embedded. If the volume of program instruction set information that a given programming transmission must transmit exceeds the transmission capacity of said transmission [e.g., if the audience includes viewers who do not have overlay capacity and would see "snow" were set information transmitted in portions of the transmission obscured by overlays], at the proper time transmission stations can transmit said set information outside the conventional transmission [a program originating studio may transmit said set information, for example, in a satellite side lobe of the transponder transmission transmitting the conventional transmission, and a cable head end intermediate transmission station transmits it in a separate television channel or in a transmission in a multiplexed FM frequency spectrum transmission].)
Column 4 lines 28-30.	Different and differing numbers of signals may be sent in different and differing word lengths and locations.	Page 533 lines 9-17.	In the preferred embodiment...SPAM messages are composed of varying numbers and sequences of segments of highest priority, intermediate priority, and lowest priority segment information. Complex SPAM receiver apparatus have means and are preprogrammed to process at register memory execution segment information of varying lengths of binary information.
Column 4 lines 31-33.	The present invention provides a method for obscuring the meaning of the signals to prevent unauthorized use of the signals and of their associated programming.	Page 13 lines 14-17.	It is a further purpose of this invention to provide a variety of means and methods for restricting the use of transmitted communications to only duly authorized subscribers.
Column 4 lines 34-36.	Their meanings may be obscured through encryption so that apparatus described below are necessary to decrypt them.	Page 13 lines 17-19.	Such means and methods include techniques for encrypting programming and/or instructions and decrypting them at

Column 4 lines 36-40.	In addition, the pattern of the composition, timing, and location of the signals may vary in such ways that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.	Page 13 lines 19-24.	They also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.
Column 4 lines 40-46.	Both the arrangement of signal units in signal words and the locations, timings, and lengths of signal words in individual transmissions or groups of transmissions may vary in fashions that can only be interpreted accurately by apparatus that are preprogrammed with the keys to such variations.	Page 14 lines 10-25.	... [signals] will probably lie outside the range of the television picture displayed on a normally tuned television set. In television and radio they may appear in a portion of the audio range that is not normally rendered in a form audible to the human ear. In television audio, they are likely to lie between eight and fifteen kilohertz. In broadcast print and data communications transmissions, the signals may accompany conventional print or data programming in the conventional transmission stream but will include instructions that receiver station apparatus are preprogrammed to process that instruct receiver apparatus to separate the signals from the conventional programming and process them differently. In all cases, signals may convey information in discrete words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction.
		Page 60 line 19 to page 61 line 1.	SPAM messages are composed of elements--headers, execution segments, meter-monitor segments, and information segments--whose bit lengths vary. SPAM apparatus determine the bit length of said elements in different fashions, and the particular fashion that applies to any given element relates to the priority of said element for subscriber station speed of processing. First priority segment information has the highest priority for speedy processing and is of fixed binary bit length. A SPAM header is one example of a first priority segment. An execution segment is another example. Intermediate priority segment information has lower priority, varies in bit length, but contains internal length information. A Meter-monitor segment is one example of an intermediate priority segment. Lowest priority segment information has the lowest priority, varies in length, and contains no internal information for determining segment length. Each information segment is an example of a lowest priority segment.
		Page 91 lines 18-20.	All subscriber station apparatus are fully preprogrammed

1987 Spec Reference	1987 Language	1987 Spec Reference	1987 Language
Column 4 lines 47-49.	The present invention also provides a method for identifying attempts to make unauthorized use of signals and the programming associated with signals.	Page 293 lines 32-35.	to perform automatically each step of each example. No manual step is required at any station.
Column 4 lines 49-50.	When an apparatus finds that signal words fail to appear in places...	Page 293 lines 28-33.	At each station where a match fails to occur--which suggests that the preprogrammed SPAM operating information of said station has been tampered with in an unauthorized fashion--not resulting in a match causes... (Simultaneously other stations compare information of other selected information of bit locations that contain information of said enable-CC13 instructions with information of other local bit locations that hold preprogrammed SPAM operating information. At each station where a match fails to occur--which suggests that the preprogrammed SPAM...
Column 4 line 51.	...and at times when and where they are expected,...	Page 300 lines 10-12.	In due course, but still before said 8:30 PM time, said program originating studio embeds in the video portion and transmits particular SPAM check information....
Column 4 lines 51-53.	...the apparatus may automatically contact one or more remote sites...	Page 301 lines 4-10.	(Simultaneously other stations compare selected information of said check sequence to selected information of said 1st-stage-enable-WSW-program instructions. At each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly and suggests that the preprogrammed SPAM operating information of said station may have been tampered with....
Column 4 lines 53-54.	...and may or may not disable the flow of programming in one or more ways.	Page 294 lines 10-13.	...causes said controller, 20, to cause the auto dialer, 24, and telephone connection, 22, to establish telephone communications with a particular predetermined remote station, in the fashion described above....
		Page 301 lines 18-21.	...said portion causes controller, 20, to cause the auto dialer, 24, and telephone connection, 22, of said station to establish telephone communications with a particular predetermined remote station, in the fashion described above....
		Page 294 lines 1-3,	...controller, 20, of said station to cause all information of said local-cable-enabling-message (#7) to be erased from all memory of said station....
		lines 25-27.	...causes said controller, 20, to erase all preprogrammable RAM and EPROM of the signal processing apparatus at said station, thereby disabling said apparatus.)

Appendix C

Appendix C

		Page 301 lines 11-14, lines 28-30.	...resulting in a match causes the controller, 20, of said station to cause all information of said 1st-WSW-program-enabling-message (#7) to be erased from all memory of said station.... ...the instructions of said portion cause said controller, 20, to erase all preprogrammable RAM and EPROM of the signal processing apparatus at said station.... In the present invention, particular signal processing apparatus (hereinafter called the "signal processor") The apparatus include one or more devices that can selectively scan transmission frequencies as directed.... The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors.... ...transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information.... ...decryptors that may convert the received information, in part or in whole, to other digital information according to preset methods or patterns;.... ...and one or more processor/monitors and/or buffer/comparators that organize and transfer the information stream.
Column 4 lines 55-56.	The present invention contemplates signal processing apparatus....	Page 15 lines 7-8.	
Column 4 lines 56-57.	...comprising a device or devices that can selectively scan transmission channels as directed.	Page 15 lines 12-14.	
Column 4 lines 57-59.	The channels may convey television, radio, or other transmission frequencies.	Page 15 lines 16-17.	
Column 4 lines 59-60.	The input transmissions may be received by means of antennas or from hard-wire connections.	Page 15 lines 17-19.	
Column 4 lines 61-62.	The scanners/switches, working in parallel or series or combinations, transfer the transmissions....	Page 15 lines 19-21.	
Column 4 lines 62-65.	...to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information....	Page 15 lines 21-23.	
Column 4 lines 65-67.	...decryptors that may convert the received information, in part or in whole, to other digital information according to preset methods or patterns;....	Page 15 lines 23-26.	
Column 4 line 68 to column 5 line 2.	...and one or more processor/monitors and/or buffer/comparators that organize and transfer the information stream.	Page 15 lines 26-28.	

V. COLUMN 5

Column 5 lines 2-4.	The processors and buffers can have inputs from each of the receiver/detector lines and evaluate information continuously.	Page 15 lines 28-30.	The processors and buffers can have inputs from each of the receiver/detector lines and evaluate information continuously.
Column 5 lines 4-7.	From the processors and buffers, the signals may be transferred to external equipment such as computers, videotape recorders and players, etc.	Page 15 lines 30-32.	From the processors and buffers, the signals may be transferred to external equipment such as computers, videotape recorders and players, etc.
Column 5 lines 7-11.	And/or they may be transferred to one or more internal digital recorders that receive and store in memory the recorded information and have connections to one or more remote sites for further transmission of the recorded information.	Page 15 line 32 to page 16 line 1.	And/or they may be transferred to one or more internal digital recorders that receive and store in memory the recorded information and have connections to one or more remote sites for further transmission of the recorded information.

1987 Spec Reference	1987 Language	1987 Spec Reference	1987 Language
Column 5 lines 11-14.	The apparatus has means for external communication and transfer stored information as required in a predetermined fashion or fashions.	Page 16 lines 1-3.	The apparatus has means for external communication and an automatic dialer and can contact remote sites and transfer stored information....
Column 5 lines 14-16.	The apparatus has a clock for determining and recording time as required.	Page 16 lines 4-6.	The apparatus has a clock for determining and recording time as required.
Column 5 lines 16-20.	It has a read only memory for recording permanent operating instructions and other information and a programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions.	Page 16 lines 6-10.	It has a read only memory for recording permanent operating instructions and other information and a programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions.
Column 5 lines 20-22.	The PRAM controller may be connected to all internal operating units for full flexibility of operations.	Page 16 line 10-11.	The PRAM controller may be connected to all internal operating units for full flexibility of operations.
Column 5 lines 23-27.	Signal processing apparatus that are employed in specific situations that require fewer functions than those provided by the basic apparatus described above may omit one or more of the specific operating elements described above.	Page 16 lines 12-15.	Signal processing apparatus that are employed in specific situations that require fewer functions than those provided by the signal processor described above may omit one or more of the specific operating elements described above.
Column 5 line 29.	BRIEF DESCRIPTION OF THE DRAWINGS	See generally page 16 line 33 to page 19 line 1.	BRIEF DESCRIPTION OF THE DRAWINGS
Column 5 lines 30-31.	Fig. 1 is a block diagram of one embodiment of signal processing apparatus.	Page 17 lines 9-10.	Fig. 2 is a block diagram of one embodiment of a signal processor.
Column 5 lines 32-33.	Fig. 2A is a block diagram of a TV signal decoder apparatus.	Page 17 lines 11-12.	Fig. 2A is a block diagram of a TV signal decoder apparatus.
Column 5 lines 34-35.	Fig. 2B is a block diagram of a radio signal decoder apparatus.	Page 17 lines 13-14.	Fig. 2B is a block diagram of a radio signal decoder apparatus.
Column 5 lines 36-37.	Fig. 2C is a block diagram of an other signal decoder apparatus.	Page 17 lines 15-16.	Fig. 2C is a block diagram of an other signal decoder apparatus.
Column 5 lines 38-41.	Figs. 3A 3B and 3C are a block diagram of signal processing apparatus and methods as they might be used in an intermediate transmission facility, in this case a cable system head end.	Page 18 lines 13-15.	Fig. 6 is a block diagram of one example of signal processing apparatus and methods at an intermediate transmission station, in this case a cable system headend.
Column 5 lines 42-57.	Fig. 4A is a block diagram of a signal processor and a programming decryptor or other interrupt means with signals input to the signal processor before programming decryption. Also included is a local input. Fig. 4B is a block diagram of a signal processor and a decryptor/interruptor with signals input to the signal processor in programming after programming decryption. Fig. 4C is a block diagram of a signal processor and a decryptor/interruptor with signals input both before and after programming decryption.	Page 18 lines 8-9.	Fig. 4 is a block diagram of one example of a signal processing programming reception and use regulating system.

	Fig. 4D is a block diagram of a signal processor and a multiple decryptor/interrupters in series, with signals input both before and after programming decryption. Fig. 4E is a block diagram of a signal processor and multiple decryptor/interrupters and with signals from one channel needed for decryption of a second channel.		
Column 5 lines 58-60.	Fig. 5 is a block diagram of signal processor apparatus monitoring various programming and viewership patterns.	Page 18 lines 10-12.	Fig. 5 is a block diagram of one example of a signal processing apparatus and methods monitoring system installed to monitor a subscriber station.
Column 5 lines 61-64.	Fig. 6A is a block diagram of signal processor apparatus and methods used to instruct and inform external equipment governing the environment of the local receiver site.	Page 18 lines 18-20.	Fig. 7A is a block diagram of signal processing apparatus and methods with external equipment regulating the environment of the local receiver site.
Column 5 lines 65-68.	Fig. 6B is a block diagram of signal processor apparatus and methods used to co-ordinate a multi-media, multi-channel presentation and monitor such viewership.	Page 18 lines 21-23.	Fig. 7B is a block diagram of signal processing apparatus and methods used to control a combined medium, multi-channel presentation and to monitor such viewership.

VI. COLUMN 6

Column 5 lines 2-4.	The processors and buffers can have inputs from each of the receiver/detector lines and evaluate information continuously.	Page 15 lines 28-30.	The processors and buffers can have inputs from each of the receiver/detector lines and evaluate information continuously.
Column 5 lines 4-7.	From the processors and buffers, the signals may be transferred to external equipment such as computers, videotape recorders and players, etc.	Page 15 lines 30-32.	From the processors and buffers, the signals may be transferred to external equipment such as computers, videotape recorders and players, etc.
Column 5 lines 7-11.	And/or they may be transferred to one or more internal digital recorders that receive and store in memory the recorded information and have connections to one or more remote sites for further transmission of the recorded information.	Page 15 line 32 to page 16 line 1.	And/or they may be transferred to one or more internal digital recorders that receive and store in memory the recorded information and have connections to one or more remote sites for further transmission of the recorded information.
Column 5 lines 11-14.	The apparatus has means for external communication and an automatic dialer and can contact remote sites and transfer stored information as required in a predetermined fashion or fashions.	Page 16 lines 1-3.	The apparatus has means for external communication and an automatic dialer and can contact remote sites and transfer stored information....
Column 5 lines 14-16.	The apparatus has a clock for determining and recording time as required.	Page 16 lines 4-6.	The apparatus has a clock for determining and recording time as required.
Column 5 lines 16-20.	It has a read only memory for recording permanent operating instructions and other information and a programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions.	Page 16 lines 6-10.	It has a read only memory for recording permanent operating instructions and other information and a programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions.
Column 5 lines 20-22.	The PRAM controller may be connected to all internal operating units for full flexibility of operations.	Page 16 line 10-11.	The PRAM controller may be connected to all internal operating units for full flexibility of operations.

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Column 5 lines 34-35.	Fig. 2B is a block diagram of a radio signal decoder apparatus.	Page 17 lines 13-14.	Fig. 2B is a block diagram of a radio signal decoder apparatus.
Column 5 lines 36-37.	Fig. 2C is a block diagram of an other signal decoder apparatus.	Page 17 lines 15-16.	Fig. 2C is a block diagram of an other signal decoder apparatus.
Column 5 lines 38-41.	Figs. 3A 3B and 3C are a block diagram of signal processing apparatus and methods as they might be used in an intermediate transmission facility, in this case a cable system head end.	Page 18 lines 13-15.	Fig. 6 is a block diagram of one example of signal processing apparatus and methods at an intermediate transmission station, in this case a cable system headend.
Column 5 lines 42-57.	Fig. 4A is a block diagram of a signal processor and a programming decryptor or other interrupt means with signals input to the signal processor before programming decryption. Also included is a local input. Fig. 4B is a block diagram of a signal processor and a decryptor/interruptor with signals input to the signal processor in programming after programming decryption. Fig. 4C is a block diagram of a signal processor and a decryptor/interruptor with signals input both before and after programming decryption. Fig. 4D is a block diagram of a signal processor and a multiple decryptor/interrupters in series, with signals input both before and after programming decryption. Fig. 4E is a block diagram of a signal processor and multiple decryptor/interrupters and with signals from one channel needed for decryption of a second channel.	Page 18 lines 8-9.	Fig. 4 is a block diagram of one example of a signal processing programming reception and use regulating system.
Column 5 lines 58-60.	Fig. 5 is a block diagram of signal processor apparatus monitoring various programming and viewership patterns.	Page 18 lines 10-12.	Fig. 5 is a block diagram of one example of a signal processing apparatus and methods monitoring system installed to monitor a subscriber station.
Column 5 lines 61-64.	Fig. 6A is a block diagram of signal processor apparatus and methods used to instruct and inform external equipment governing the environment of the local receiver site.	Page 18 lines 18-20.	Fig. 7A is a block diagram of signal processing apparatus and methods with external equipment regulating the environment of the local receiver site.
Column 5 lines 65-68.	Fig. 6B is a block diagram of signal processor apparatus	Page 18 lines 21-23.	Fig. 7B is a block diagram of signal processing apparatus

and methods used to control a combined medium, multi-channel presentation and to monitor such viewership.

and methods used to co-ordinate a multi-media, multi-channel presentation and monitor such viewership.

VII. COLUMN 7

Column 7 lines 1-5.	Detectors, 34, 37, and 38, line receiver, 33, and high pass filter, 36, all operate in predetermined fashions which fashions may be changed by external controller, 20 (referring to Fig. 1), to be described below.	Page 35 lines 31-35.	Line receiver, 33; high pass filter, 36; detectors, 34, 37, and 38; and controller, 39, all operate under control of controller, 39, and in preprogrammed fashions that may be changed by controller, 39.
Column 7 lines 6-11.	If one returns to FIG. 1, one sees that the three separate lines of information outputted from TV signal decoder, 30, are then gated to a buffer/comparator, 8, which also receives other inputs from the other separate receivers comprising similar filters, demodulators, and decoders for other channels of interest.	Page 33 lines 18-21.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor and can receive operating information from said elements.
Column 7 lines 12-15.	One such other path is that from mixer 2. Mixer 2 and the controlled oscillator, 6, act to select a radio frequency of interest which is inputted to a radio signal decoder, 40,...	Page 29 line 33 to page 30 line 5.	Decoder, 30, which is shown in detail in Fig. 2A, and decoder, 40, which is shown in Fig. 2B, detect signal information embedded in the respective inputted television and radio frequencies; ... and output said signals and said modified signals to buffer/comparator, 8.
Column 7 lines 15-18.	...shown in FIG. 2B. The frequency passes first through standard radio receiver circuitry, 41, well known in the art, a radio decoder, 42, and a standard digital detector, 43.	Page 29 lines 26-29.	Simultaneously, mixer, 2, and the controlled oscillator, 6, act to select a radio frequency of interest which is inputted to a radio signal decoder, 40.
		Page 36 lines 1-14.	Fig. 2B shows a radio signal decoder that detects and processes signal information embedded in an inputted radio frequency. Decoder, 40, in Fig. 2 is one such radio signal decoder. A selected frequency of interest is inputted at a fixed frequency to standard radio receiver circuitry, 41, which receives the radio information of said frequency using standard radio receiver techniques, well known in the art, and transfers said radio information to radio decoder, 42. Radio decoder, 42, decodes the signal information embedded in said radio information and transfers said decoded information to a standard digital detector, 43. Said detector, 43, detects the binary signal information in said decoded information and inputs said signal information to controller, 44, discussed more fully below.
Column 7 lines 18-20.	All operate in predetermined fashions that may be changed by external controller, 20 (referring to Fig. 1).	Page 36 lines 14-17.	Circuitry, 41; decoder, 42; and detector, 43, all operate under control of controller, 44, and in predetermined fashions that may be changed by controller, 44.
		Page 33 lines 18-21.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor and can receive operating

1987 Spec Reference	1987 Language	1987 Spec Reference	1987 Language
Column 7 lines 20-21.	As FIG. 1 shows, the radio signal detector outputs to buffer/comparator 8.	Page 29 line 32 to page 30 line 5.	information from said elements. Decoder, 30, which is shown in detail in Fig. 2A, and decoder, 40, which is shown in Fig. 2B, detect signal information embedded in the respective inputted television and radio frequencies, ... and output said signals and said modified signals to buffer/comparator, 8.
Column 7 lines 22-24.	(The signal processor apparatus described here is configured to receive broadcast TV transmissions and cablecast TV and radio transmissions.	Page 29 lines 4-7.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.
Column 7 lines 24-30.	Were it desirable to process signals in other transmissions such as broadcast microwave transmissions or cablecast transmissions on other than standard TV and radio frequencies, the mixers and switches would be appropriately reconfigured and one or more other signal decoders as described in FIG. 2C would be added.	Page 33 lines 26-33.	... a signal processor can monitor any combination of inputs and transmission frequencies, and the signal processor of Fig. 2 is but one embodiment of a signal processor. Other embodiments can receive and monitor available programming in transmission frequencies other than radio and television frequencies through the addition of one or more other signal decoders such as that of Fig. 2C described below.
Column 7 lines 30-34.	As FIG. 2C shows, the desired frequencies would pass through appropriate other receiver circuitry, 45, well known in the art, and an appropriate digital detector, 46, before being outputted to buffer/comparator 8.	Page 36 lines 18-29.	Fig. 2C shows a signal decoder that detects and processes signal information embedded in a frequency other than a television or radio frequency. A selected other frequency (such as a microwave frequency) is inputted to appropriate other receiver circuitry, 45, well known in the art. Said receiver circuitry, 45, receives the information of said frequency using standard receiver techniques, well known in the art, and transfers said information to an appropriate digital detector, 46. Said detector, 46, detects the binary signal information in said information and inputs said signal information to controller, 47, considered more fully below.
Column 7 lines 34-35.	These, too, can be controlled by controller, 20 (ref. to Fig. 1.)	Page 36 lines 29-31.	Circuitry, 45, and detector, 46, operate under control of controller, 47, and in predetermined fashions that may be changed by controller, 47.
Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a pre-determined fashion...	Page 33 lines 18-21. Page 30 lines 7-9.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor and can receive operating information from said elements. Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.
		Page 36 line 32 to page 37 line 3.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
Column 7 lines 37-39.	...that enables buffer/comparator, 8, among other things, to assemble signal units from signal words.	Page 37 lines 22 to page 38 line 10.	Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs Controller, 39, 44, or 47, is preprogrammed to receive units of signal information, to assemble said units into signal words that subscriber station apparatus can receive and process, and to transfer said words to said apparatus. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. Said controller, 39, 44, or 47, has one or more output ports for communicating signal information to said apparatus.
		Page 156 line 33. Page 157 lines 5-7. Page 14 lines 22-25.	Fig. 3A shows one such preferred controller, 39. Buffer, 39C, and processor, 39D, are the second buffer and processor and perform protocol conversion functions. In all cases, signals may convey information in discrete words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction.
Column 7 lines 39-43.	In a pre-determined fashion, buffer/comparator, 8, identifies signal words and/or signal units that must be decrypted, either in whole or in part, and passes identified signal words and/or units to decrypter, 10.	Page 30 lines 21-26.	In a fashion described more fully below, buffer/comparator, 8, and a controller, 20, which, too, is described more fully below, determine whether signal processor, 26, is enabled to decrypt said information. If signal processor, 26, is so enabled, buffer/comparator, 8, transfers said information to decryptor, 10.

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
Column 7 lines 43-46.	Decrypter, 10, uses conventional decrypter techniques, well known in the art, in a pre-determined fashion to decrypt such signals as required.	Page 30 lines 31-35.	Decryptor, 10, is a standard digital information decryptor, well known in the art, that ... uses conventional decryptor techniques, well known in the art, to decrypt said signals as required.
Column 7 lines 46-47.	Decrypter, 10, then passes the decrypted signals to processor or monitor, 12.	Page 30 line 35 to page 31 line 1.	Decryptor, 10, transfers decrypted signals to controller, 12.
Column 7 lines 47-49.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 29-30.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.
Column 7 lines 50-54.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both.	Page 31 lines 10-14.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both.
Column 7 lines 54-58.	If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 31 lines 14-18.	If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.
Column 7 lines 59-60.	If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Page 31 lines 18-22.	If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.
Column 7 lines 60-64.	Processor or monitor, 12, communicates with clock, 18, and has means to delay the transfer of signals, in a predetermined fashion, when delayed transfer is determined, in a predetermined fashion, to be required.	Page 31 lines 26-29.	Controller, 12, receives time information from clock, 18, and has means to delay in a predetermined fashion the transfer of signals when, in a predetermined fashion, delayed transfer is determined to be required.
Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Page 31 line 30 to page 32 line 6.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...
Column 7 line 67 to column 8 line 1.	To avoid overloading digital recorder, 16, with duplicate data, buffer/comparator, 14, has means for counting and discarding duplicate signals.	Page 32 lines 9-12.	To avoid overloading digital recorder, 16, with duplicate data, buffer/comparator, 14, has means for counting and/or discarding duplicate instances of particular signal information....

Appendix C

VIII. COLUMN 8

Column 8 lines 2-4.	Buffer/comparator, 14, is connected to clock, 18, and has means for adding information such as time of receipt, for example, to signals.	Page 32 lines 14-16.	Buffer/comparator, 14, receives time information from clock, 18, and has means for incorporating time information into signal records.
Column 8 lines 4-7.	Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16.	Page 31 line 30 to page 32 line 1.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, ...
Column 8 lines 7-12.	Buffer/ comparator, 14, also has means for determining, in a predetermined fashion, when signals require transfer immediately to a remote site and for communicating such a requirement to controller, 20, and such signals directly with the remote site via telephone connection, 22.	Page 32 lines 16-20.	Buffer/comparator, 14, also has means for transferring received information immediately to a remote site or sites via telephone connection, 22, and for communicating a requirement for such transfer to controller, 20, which causes such transfer.
Column 8 lines 13-14.	Digital recorder, 16, may be a memory storage element of standard design.	Page 32 lines 34-35.	Digital recorder, 16, is a memory storage element of standard design.
Column 8 lines 14-16.	It has means for determining in a predetermined fashion how full it is and passing this information to controller, 20.	Page 33 lines 2-4.	In a predetermined fashion, recorder, 16, can determine how full it is and transmit this information to controller, 20.
Column 8 lines 16-19.	The predetermined fashion may include provisions whereby recorder, 16, informs controller, 20, automatically when it reaches a certain level of fullness.	Page 33 lines 4-6.	Recorder, 16, may inform controller, 20, automatically when it reaches a certain level of fullness.
Column 8 lines 20-25.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22.	Page 33 lines 7-12.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22.
Column 8 lines 25-27.	The controller, 20, governs the operation of all operating elements of the apparatus.	Page 33 lines 18-20.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...
Column 8 lines 27-29.	The controller, 20, inputs the local oscillator, 6, a sequential pattern to select the various channels to be received by switch, 1, and mixers, 2 and 3.	Page 248 line 35 to page 249 line 5.	In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.
Column 8 lines 30-32.	This then allows the channels to be diverted to the detectors, receivers, and decoders in any predetermined pattern desired.	Page 248 line 35 to page 249 line 5.	In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.

Appendix C

	<p>Page 253 lines 22-35.</p>	<p>Automatically oscillator, 6, causes switch, 1, to shift its alternate contact from the first alternate contact to the second and causes mixer, 3, to select the frequency of channel 5 and input said frequency of interest, at a fixed frequency, to decoder, 30. Controller, 20, then transmits a particular preprogrammed wireless-5 instruction to said control processor, 39J, that informs said processor, 39J, wireless channel 5 is inputted to decoder, 30.</p> <p>Receiving said wireless-5 instruction causes control processor, 39J, to cause all apparatus of decoder, 30, to commence receiving, detecting, and processing SPAM message information embedded in the inputted frequency of interest.</p>
	<p>Page 265 line 30 to page 266 line 4.</p>	<p>Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40. Controller, 20, then transmits a particular preprogrammed radio-99.0 instruction to control processor, 44J, that informs said processor, 44J, 99.0 MHz is inputted to decoder, 40.</p> <p>Receiving said radio-99.0 instruction causes control processor, 44J, to cause all apparatus of decoder, 40, to commence receiving, detecting, and processing SPAM message information embedded in the inputted frequency of interest.</p>
<p>Column 8 lines 32-35.</p>	<p>Page 33 lines 18-20.</p> <p>For example, page 290 line 11 to page 291 line 4.</p>	<p>The controller, 20, can instruct signal decoders, 30 and 40, when, where, and how to look for signal words, which allows signal words to be received in any pattern or patterns.</p> <p>... executing said instructions causes controller, 20, causes prepare to receive a particular enabling SPAM message at a particular time. Automatically, controller, 20, checks the time of the clock, 18, of signal processor, 200, periodically. At a particular commence-enabling time that is a predetermined interval prior to the aforementioned 8:30 PM time (when said originating studio commences transmitting the "Wall Street Week" program), controller, 20, causes all apparatus of the TV signal decoder, 30, to delete from memory all information of received SPAM information; transmits particular preprogrammed enable-next-program-on-CC13 information to the control processor, 39J, of said decoder, 30, and causes said control processor, 39J, to place one instance of said information at a particular controlled-function-invoking information location;</p>

Appendix C

			causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; causes said control processor, 39, to cause digital detectors, 34, 37, and 38, to cease inputting detected information to controller, 39, and commence discarding said information (which said detectors, 34, 37, and 38, have capacity to do) and to cause particular apparatus of decoder, 30,--for example, line receiver, 33, and digital detector, 34--to commence receiving and inputting to controller, 39, SPAM information detected in the frequency inputted to decoder, 30; ...
		Page 13 lines 19-24.	They also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.
Column 8 lines 35-37.	[Controller, 20 can instruct buffer/ comparator, 8,] how to assemble signal words into signal units and join units together for further transfer and...	Page 33 lines 18-20. Page 37 line 31 to page 38 line 3. Page 39 lines 16-21.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor ... Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... Controller, 20, has capacity to preprogram (or reprogram) all said decoder apparatus, 27, 28, 29, 30, and 40, and thereby controls the fashions of detecting, correcting, converting, modifying, identifying, transferring, and other functioning of said decoders.
Column 8 lines 38-39.	...[Controller, 20 can instruct buffer/comparator 8] how to determine which signals to pass to decrypter, 10.	Page 33 lines 18-20. For example, page 147 lines 29-31.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor ... Then said decrypt-with-J instructions cause controller, 20, to activate the output capacity of buffer/comparator, 8, that outputs to decrypter, 10; ...

Appendix C

Column 8 lines 39-40.	[Controller, 20] can tell decryptor, 10, when and how to change decryption patterns, fashions, and techniques.		For example, page 148 lines 4-16.	Controller, 20, is preprogrammed with ... Using preprogrammed information and instructions as required, said decrypt-a-00-header-message instructions transfer the received binary information of said second message from buffer/comparator, 8, to decryptor, 10, in the same fashion that the aforementioned transfer-a-00-header-message instructions controlled the transfer of the information of said message from controller, 39, to buffer/comparator, 8. Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...
Column 8 lines 40-44.	[Controller, 20] can tell processor or monitor, 12, how to determine which signals to pass externally and when and where and how to determine which signals to pass to buffer/comparator, 14.		Page 33 lines 18-20. For example, page 147 lines 23-28. For example, page 149 line 27 to page 150 line 6.	Among said preprogrammed instructions is key information of J, and said instructions cause controller, 20, automatically to select and transfer said key information to decryptor, 10. Decryptor, 10, receives said key information and automatically commences using it as its key for decryption. Decryptor, 10, commences ... decrypting ... Said decrypt-a-00-header-message instructions cause controller, 20, to cause decryptor, 10, to transfer the first 11 bits without decrypting or altering said bits in any fashion, to decrypt and transfer the next X bits, to transfer the next L bits without decrypting or altering said bits, to decrypt and transfer the next MMS-L bits, and finally, to transfer any bits remaining after the last of said MMS-L bits without decrypting or altering said bits. In this fashion, the cadence information in said message, which is not encrypted, is transferred by decryptor, 10, to controller, 12, without alteration. Controller, 20, has capacity for controlling the operation of all elements of the signal processor and ... Then said ... instructions cause controller, 20, to transmit to controller, 12, a particular transfer-decrypt-message instruction and particular decryption mark information of key J that identifies J as the decryption key. Receiving said instruction and information causes controller, 12, to execute particular preprogrammed transfer- and-meter instructions ...
Column 8 lines 40-44.			Page 33 lines 18-20. Page 149 lines 8-15.	Automatically, controller, 12, executes preprogrammed transfer-to-205-@12 instructions; activates the output port that outputs to SPAM- controller, 205C; then commences

Appendix C

		<p>For example, page 152 line 19 to page 153 line 1.</p>	<p>transferring information of said decrypted information of the second message <i>under control of said transfer-and-meter instructions</i> commencing with the first of said 11 bits and transferring information, ...</p> <p>... causes controller, 12, to cease transferring information, under control of said transfer-and-meter instructions, to deactivate all output ports, and to commence <i>executing the meter instructions of said transfer-and-meter instructions</i>. Said meter instructions cause controller, 12, ... to transfer to buffer/comparator, 14, particular header identification information that identifies controller, 12, as the source of said transfer the information recorded at said SPAM-meter memory then the information recorded at said decryption-mark-@12 register memory, which information is the decryption mark of key J. (Hereinafter, said meter information generated by the second combining synch command in example #2 is called the "2nd meter information (#2).")</p>
<p>Column 8 lines 44-46.</p>	<p>[Controller, 20] can tell buffer/comparator, 14, what and how to count, what and how to mark signals, and what received signals to discard.</p>	<p>Page 32 lines 20-21.</p> <p>Page 32 lines 10-13.</p> <p>For example, page 223 lines 22-33.</p>	<p>Buffer/comparator, 14, operates under control of controller, 20, ...</p> <p>... buffer/comparator, 14, has means for counting and/or discarding duplicate instances of particular signal information and for incorporating count information into signal records.</p> <p>Said match causes controller, 20, to execute said instructions. Under control of said first set, controller, 20, initiates assembly of said first meter record by selecting and placing at particular record locations at buffer/comparator, 14, particular record format information, then program unit information from a particular meter-monitor field of said 1st meter & monitor information (#4), origin of transmission information from a second field, date and time of transmission information from a third field, decryption key information from the decryption mark of said 1st meter & monitor information (#4), and finally date and time of processing information from clock, 18.</p> <p>When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to</p>

1987 Shearwater Technical Reference	1987 Language	1987 Spac Reference	1987 Language
Column 8 lines 46-50.	The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.	Page 33 lines 18-20. Page 273 lines 4-6. Page 273 lines 21-25.	<p>recorder, 16, in a predetermined fashion then discard all information of said record from its memory and to ...</p> <p>Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...</p> <p>The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station.</p> <p>... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.</p> <p>Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number.</p> <p>Controller, 20, transfers the telephone number, 1-800-CHARGES, to auto dialer, 24, and causes the dialing of said number.</p> <p>Controller, 20, has capacity for ... all elements of the signal processor and can receive operating information from said elements.</p> <p>... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ...</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.</p> <p>... causes said controller, 20, again to cause said switch, 1, and said mixer, 3, to input the transmission of said master channel to said decoder, 30, and to cause said decoder, 30, to</p>
Column 8 lines 50-55.	The controller, 20, also controls the automatic telephone dialing device, 24, to allow the apparatus to automatically output its own information in accordance with a predetermined sequence and to change telephone numbers dialed as required.	Page 273 lines 6-8. Page 274 lines 11-13.	
Column 8 lines 56-58.	To facilitate the operation of the device, the controller, 20, can receive information from all operating elements of the apparatus.	Page 33 lines 18-21.	
Column 8 lines 58-60.	Control signals can be passed to the apparatus by means of the programming transmissions input at switch, 1, and mixer, 2.	Page 290 lines 26-31. Page 291 lines 21-24. Page 59 lines 29-31. Page 402 lines 22-26.	
Column 8 lines 60-62.	An example of such a control signal is an instruction for the apparatus to contact a remote telephone unit.		

Appendix C

			<p>commence processing to detect a SPAM end of file signal.</p> <p>Said message is detected at said decoder, 30, and inputted to the controller, 39, of said decoder, 30.</p> <p>Receiving said message causes said controller, 39, to transmit said Read-Meters-of-Selected-Stations SPAM message to the controller, 20, of the signal processor, 200, of said station.</p> <p>Executing said ones causes controller, 20, to transmit the current reading information of utilities meter, 262, to a remote metering station computer and cause said computer to process said information. Automatically, controller, 20, ... activates telephone connection, 22, inputs a particular telephone number ...</p>
Column 8 lines 62-65.	The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines.	<p>Page 403 lines 7-12.</p> <p>Page 405 lines 20-29.</p>	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.</p> <p>Said contained messages that are addressed to apparatus such as decoder, 30, PRAM controller, 20, and switch controller, 20A, that exist within the equipment case of a signal processor, 200, are inputted to said apparatus from controller, 12, via controller, 20, rather than via matrix switch, 259 ...</p> <p>(In circumstances where information collecting and processing functions are extensive—for example, when a given buffer/comparator, 14, must collect monitor information at a subscriber station with apparatus and/or communications flows that are extensive and complex--buffer/comparator, 14, may operate under control of a dedicated, so-called "on-board" controller, 14A, at buffer/comparator, 14, which is preprogrammed with appropriate control instructions and is controlled by controller, 20, ...</p>
Column 8 lines 65-68.	Buffer/comparator, 14, has the capacity to pass received time signals to the controller, 20, in a predetermined fashion set by and changeable by controller, 20.	<p>Page 32 lines 24-32.</p> <p>For example, page 179 lines 24-32.</p>	<p>Automatically, under control of said process-monitor-info instructions, onboard controller, transmits to controller, 20, a particular preprogrammed instruct-to-record instruction that causes controller, 20, to cause onboard controller, 14A, to transmit the monitor record of said prior programming to recorder, 16, in a predetermined fashion and that causes controller, 20, to cause recorder, 16, to record said monitor record information in a predetermined fashion.</p>

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
Column 8 line 68 to column 9 line 4.	Buffer/comparator, 8, and monitor or processor, 12, each have the capacity to inform controller, 20, when signals that they are instructed to look for in predetermined fashions, set by and changeable by controller, 20, fail to appear.	Page 33 lines 18-21. For example, page 300 line 32 to page 301 line 1. with respect to Page 301 lines 6-11.	<p>... is described more fully below. Controller, 20, has capacity for controlling the operation of all elements of the signal processor and can receive operating information from said elements. Controller, 20, has capacity to turn off any ...</p> <p>... program instructions, to cause the control processor, 39J, of decoder, 30, to transfer to controller, 20, selected information of said check sequence of binary information and compare said selected information to selected information of said 1st-stage-enable-WSW-program instructions ...</p> <p>At each station where a match fails to occur—which indicates that a decryptor, 224, is not decrypting its received information correctly and suggests that the preprogrammed SPAM operating information of said station may have been tampered with—not resulting in a match causes the controller, 20; ...</p>

IX. COLUMN 9

Column 9 lines 4-8.	<p>Oscillator, 6, the controller, 20, and buffer/comparator, 8, can interact in such a fashion that buffer, 8, can identify the channel that any given signal is received on and mark the signal for subsequent identification of the channel.</p>	<p>Page 258 lines 17-25.</p> <p>Page 260 lines 5-13.</p>	<p>... said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. Automatically, oscillator, 6, causes mixer, 3, to select the frequency of channel 13 and input said frequency to decoder,</p> <p>30. Controller, 20, then transmits a particular preprogrammed wireless-13 instruction to said control processor, 39J, that informs said processor, 39J, wireless channel 13 is inputted to decoder, 30.</p> <p>... commence transferring information from control processor, 39J, to buffer/comparator, 8, then to transmit a message that consists of binary information of a "00" header then the execution segment information of the pseudo command then a meter-monitor segment containing said monitor information in RAM (including the associated channel mark and the format information of said information) then any padding bits required to end said message. (Hereinafter, said message is called the "3rd-old-program-message (#5)". ...</p>
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Appendix C

			<p>Receiving any given old programming message causes onboard controller, 14A, to ... determine that the channel mark ... in said old programming message matches the channel mark ... of a selected monitor information record previously initiated ...</p> <p>Recorder, 16, may inform controller, 20, automatically when it reaches a certain level of fullness.</p> <p>In each example, ... recorder, 16, measures the quantity of its recording capacity that holds signal records, in a predetermined fashion, and determines that said quantity is equal to or greater than said particular fullness information. Said determining causes recorder, 16, to transfer a particular instruct-to-call instruction to controller, 20, that causes controller, 20, to activate telephone connection, 22, and proceed with a particular preprogrammed telephone signal record transfer sequence that is fully automatic.</p> <p>The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number.</p> <p>Automatically said second computer responds with a particular transmission complete signal that causes controller, 20, to terminate said telephone call then to cause recorder, 16, to erase from memory all said meter charge information.</p>
Column 9 lines 8-10.	Digital recorder, 16, can tell the controller, 20, when it reaches predetermined levels of fullness...	Page 270 lines 5-12.	
Column 9 lines 10-12.	to permit the controller, 20, to instruct auto dialer, 24, to contact an appropriate remote site allowing the recorder, 16, to output its data	Page 33 lines 4-6.	
Column 9 lines 13-16.	...making memory available. In normal operation, controller, 20, may be instructed by the remote site to erase recorder, 16, which instruction controller, 20, effects through communication with recorder, 16;...	Page 272 line 26 to page 273 line 8.	
Column 9 lines 16-19.	...however, controller may ignore such an instruction in a predetermined fashion, if the information in recorder, 16, is to be conveyed to more than one remote sites.	Page 275 line 33 to page 276 line 2.	
		Page 273 line 30 to page 274 line 10.	<p>Automatically said first computer determines, in a predetermined fashion, that the audit information has been received correctly and completely, and said determining causes said first computer automatically to transmit a particular transmission complete signal to controller, 20. Receiving said complete signal causes controller, 20, to cause telephone connection, 22, to terminate said telephone call. Then controller, 20, transfers information to recorder, 16, that causes recorder, 16, to erase from memory all said record and other information that is <i>not also meter charge information or monitor information</i>. Having completed the first stage, controller, 20, then commences automatically the second stage of said sequence which involves <i>transferring meter charge</i></p>

Appendix C

Column 9 lines 20-21.	The controller, 20, can shut off any element or elements of the apparatus in whole or in part.		information to a particular second host computer at a second remote station.
Column 9 lines 21-22.	It is interactive with external sources via telephone connection, 22,...	Page 33 lines 21-23. Page 273 lines 6-19.	Controller, 20, has capacity to turn off any element or elements of controlled subscriber station apparatus, in whole or in part, ... Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications. Automatically, controller, 20, causes telephone connection, 22, to transfer particular identifying information that includes the unique digital identifying code of ROM, 21, to said first computer followed by a particular instruct-to-receive signal. Said instruct-to-receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20.
Column 9 line 23.	...and can be reprogrammed from such remote sources.	Page 537 lines 6-17.	At 3:10 AM, GMT, said European master network station transmits particular SPAM message information, embedded in the information of said master transmission, including a SPAM end of file signal and the aforementioned sequence of SPAM messages that contain operating system instructions. In so doing, said European master network station inputs operating system instructions to all SPAM apparatus and receiver station computers, 73, and microcomputers, 205, thereby causing said apparatus and computers, 73 and 205, as described above in "PREPROGRAMMING RECEIVER STATION OPERATING SYSTEMS," to commence operating under control of the instructions of said operating systems. ...particular information of said TELEPHONE.EXE module that causes ... signal processor, 200, to transmit the information ... via telephone network in the fashion of example #10, to a computer at a particular remote data collection station. Over the course of a particular time such as two days, computers at remote data collection stations receive data automatically from each farmer of said nations which data indicates the specific quantity of each crop that each

with respect to page 555 line 24 to page 556 line 14.

Appendix C

			<p>farmer expects to harvest during the 2027 growing season. Automatically, the received data is aggregated, in a fashion well known in the art, at the computer of said <i>European master network</i> origination and control station ... Then, at 3:59 PM, on Thursday, February 18, 2027, the cycle of generating and communicating information of farmers is repeated ...</p>
Column 9 line 26.	Operation of Signal Processor Apparatus	See generally Page 86 line 31 to page 278 line 20	Operating Signal Processor Systems ... Introduction
Column 9 lines 27-31.	The simplest forms of signal processor apparatus are each of the five paths described in Figures 2A, 2B, and 2C. Each path, by itself, is capable of identifying signals in the portions of programming transmissions that each receives.	<p>Page 34 lines 18-20.</p> <p>Page 17 lines 11-16.</p> <p>Page 15 lines 18-22.</p>	<p>Signal decoder apparatus such as decoder, 203, in Fig. 1 and decoders, 30 and 40, in Fig. 2 are basic in the unified system of this invention.</p> <p>Fig. 2A is a block diagram of a TV signal decoder apparatus.</p> <p>Fig. 2B is a block diagram of a radio signal decoder apparatus.</p> <p>Fig. 2C is a block diagram of an other signal decoder apparatus.</p> <p>... transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p>
Column 9 lines 31-33.	A digital signal is embedded by conventional generating and encoding means and transmitted in a television, radio or other transmission.	<p>Page 22 lines 1-6.</p> <p>Page 14 line 35 to page 15 line 2.</p> <p>Page 36 lines 2-3.</p>	<p>... a first series of control instructions is generated, embedded sequentially on said line or lines of the vertical interval, and transmitted on the first and each successive frame of said television program transmission, signal unit by signal unit and word by word, until said series has been transmitted in full.</p> <p>Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>... processes signal information embedded in an inputted radio frequency.</p>

Column 9 lines 33-40.	Each path is capable of receiving a transmission or a portion of a transmission and detecting digital signals in that portion and transmitting said signals to in-line equipment for further processing. Each of the paths described in FIGS. 2A, 2B, and 2C can identify and process only signals embedded in the particular transmission channel inputted to said paths.	Page 36 lines 19-20. Figs. 2A-2C. Page 35 lines 1-6. Page 35 lines 16-18. Page 35 lines 27-30. Page 36 lines 1-3. Page 36 lines 18-20. Page 37 lines 26-28.	... processes signal information embedded in a frequency other than a television or radio frequency. <i>See figures.</i> The apparatus of these separate paths are designed to act on the particular frequency ranges in which embedded signal information may be found. The first path, designated A, detects signal information embedded in the video information portion of said television channel signal. The second path, designated B, detects signal information embedded in the audio information portion of said television channel signal. The third path, designated C, inputs the separately defined transmission to a digital detector, 38, which detects signal information embedded in any other information portion of said television channel signal...
Column 9 lines 41-44.	The signal processor apparatus described in FIG. 1 can identify such signals in multiple and variable locations in multiple and variable modes, channels, and transmissions.	Page 248 line 13 to page 271 lines 30.	Fig. 2B shows a radio signal decoder that detects and processes signal information embedded in an inputted radio frequency.
Column 9 lines 44-47.	Such signals may be transmitted over and over continuously in such transmissions or they may be transmitted over and over only for predetermined time intervals.	Page 457 line 12 to page 463 line 28. Page 14 lines 3-6.	Fig. 2C shows a signal decoder that detects and processes signal information embedded in a frequency other than a television or radio frequency. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. <i>See generally.</i>
Column 9 lines 47-52.	The controller, 20, is programmed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard	Page 248 line 17 to page 249 line 5.	In programming transmissions, given signals may run and repeat, for periods of time, continuously or at regular intervals. Or they may run only occasionally or only once. They may appear in various and varying locations. Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the

Appendix C

	broadcast and cablecast practices known to exist on that transmission line or frequency.		<p>standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p>	<p>Page 257 line 24 to page 258 line 19.</p>
Column 9 lines 53-55.	The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.		<p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p>	<p>Page 257 line 24 to page 258 line 19.</p> <p>Page 265 line 27 to Page 266 line 21.</p>

Appendix C

Column 9 lines 55-57.	This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.		<p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synch command.</p> <p>Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...</p> <p>... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.</p>
		Page 250 lines 13-17.	
		Page 251 lines 8-11.	
		Page 263 lines 19-24.	
		Page 37 lines 26-28.	<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.</p> <p>Said failures to match cause the controllers, 20, of said stations automatically ... to cause said buffer/comparators, 8, to discard all received information of said second message; and to cause ... said buffer/comparators, 8, to commence processing in the conventional fashion.)</p> <p>... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. Automatically, oscillator, 6, causes mixer, 3, to select the frequency of channel 13 and input said frequency to decoder, 30. Controller, 20, then transmits a particular preprogrammed wireless-13 instruction to said control processor, 39J, that informs said processor, 39J, wireless channel 13 is inputted to decoder, 30.</p>
Column 9 lines 57-63.	The same controller will control buffer/comparator, 8, to discard received duplicate and partial signals, to mark signals with correct channel identifiers, to transfer signals to decrypter, 10, and processor or monitor, 12, as required, and to perform such other functions as buffer/ comparator, 8, performs.	Page 146 line 31 to page 147 line 3.	
		Page 258 lines 17-25.	
		Page 260 lines 5-13.	

Appendix C

		<p>Page 147 lines 29-31.</p> <p>Page 149 lines 17-20.</p> <p>Page 149 lines 27-29.</p>	<p>... commence transferring information from control processor, 39J, to buffer/comparator, 8, then to transmit a message that consists of binary information of a "00" header then the execution segment information of the pseudo command then a meter-monitor segment containing said monitor information in RAM (including the associated channel mark and the format information of said information) then any padding bits required to end said message. (Hereinafter, said message is called the "3rd-old-program-message (#5)".)</p> <p>Then said decrypt-with-J instructions cause controller, 20, to activate the output capacity of buffer/comparator, 8, that outputs to decryptor, 10;</p> <p>Next said decrypt-a-00-header-message instructions cause</p> <p>controller, 20, to cause buffer/comparator, 8, to transfer to decryptor, 10, a quantity of signal words of said binary information of the second message ...</p> <p>Decryptor, 10, commences receiving said information, decrypting it using said key J information and transferring it to controller, 12, ...</p> <p>Among said preprogrammed instructions is key information of J, and said instructions cause controller, 20, automatically to select and transfer said key information to decryptor, 10.</p> <p>Decryptor, 10, receives said key information and automatically commences using it as its key for decryption.</p> <p>Decryptor, 10, commences receiving said information, decrypting it using said key J information and transferring it to controller, 12, as quickly as controller, 12, accepts it. The process of decryption proceeds in a particular fashion. Said decrypt-a-00-header-message instructions cause controller, 20, to cause decryptor, 10, to transfer the first H bits without decrypting or altering said bits in any fashion, to decrypt and transfer the next X bits, to transfer the next L bits without decrypting or altering said bits, to decrypt and transfer the next MMS-L bits, and finally, to transfer</p>
<p>Column 9 lines 63-65.</p>	<p>The controller, 20, instructs decryptor, 10, what to decrypt and in what fashion.</p>	<p>Page 147 lines 23-28.</p> <p>Page 149 line 27 to page 150 line 6.</p>	<p>Among said preprogrammed instructions is key information of J, and said instructions cause controller, 20, automatically to select and transfer said key information to decryptor, 10.</p> <p>Decryptor, 10, receives said key information and automatically commences using it as its key for decryption.</p> <p>Decryptor, 10, commences receiving said information, decrypting it using said key J information and transferring it to controller, 12, as quickly as controller, 12, accepts it. The process of decryption proceeds in a particular fashion. Said decrypt-a-00-header-message instructions cause controller, 20, to cause decryptor, 10, to transfer the first H bits without decrypting or altering said bits in any fashion, to decrypt and transfer the next X bits, to transfer the next L bits without decrypting or altering said bits, to decrypt and transfer the next MMS-L bits, and finally, to transfer</p>

1987 Spec Reference	1987 Language	1987 Spec Reference	1987 Language	1987 Spec Reference	1987 Language	1987 Spec Reference	1987 Language	1987 Spec Reference	1987 Language
Column 9 lines 65-68.		[Controller, 20] instructs processor or monitor, 12, how to identify what signals to pass externally and where to pass them and what signals to transfer to buffer/comparator, 14.		Page 149 lines 8-16.	any bits remaining after the last of said MMS-L bits without decrypting or altering said bits. In this fashion, the cadence information in said message, which is not encrypted, is transferred by decryptor, 10, to controller, 12, without alteration. Then said decrypt-a-00-header-message instructions cause controller, 20, to transmit to controller, 12, a particular <i>transfer-decrypt-message instruction</i> and particular decryption mark information of key J that identifies J as the decryption key. Receiving said instruction and information causes controller, 12, to execute particular preprogrammed <i>transfer-and-meter instructions</i> then record said mark of key J at particular decryption-mark-@12 register memory.				Appendix C
				Page 150 lines 7-9.	Under control of said <i>transfer-and-meter instructions</i> , controller, 12, commences receiving decrypted information of the second message from decryptor, 10.				
				Page 150 lines 16-21.	Automatically controller, 12, processes said information of the second message of example #2 as a SPAM command. Receiving the header and execution segment causes controller, 12, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message accordingly.				
				Page 152 line 18 to page 153 line 1.	Receiving said complete-transfer-phase instruction causes controller, 12, to cease transferring information, under control of said <i>transfer-and-meter instructions</i> , to deactivate all output ports, and to commence executing the meter instructions of said transfer-and-meter instructions. Said meter instructions cause controller, 12, to ... transfer to buffer/comparator, 14, particular header identification information that identifies controller, 12, as the source of said transfer then the information recorded at said SPAM-meter memory then the information recorded at said decryption-mark-@12 register memory, which information is the decryption mark of key J. (Hereinafter, said meter information generated by the second combining synch command in example #2 is called the "2nd meter information (#2).")				
Column 9 line 68 to	The controller, 20, instructs buffer/comparator, 14, what			Page 32 lines 20-21.	Buffer/comparator, 14, operates under control of				

Appendix C

column 10 line 2.	signals to discard and how to mark signals and assemble signal strings.	Page 223 lines 22-33.	<p>controller, 20, ...</p> <p>Said match causes controller, 20, to execute said instructions. Under control of said first set, controller, 20, initiates assembly of said first meter record by selecting and placing at particular record locations at buffer/comparator, 14, particular record format information, then program unit information from a particular meter-monitor field of said 1st meter & monitor information (#4), origin of transmission information from a second field, date and time of transmission information from a third field, decryption key information from the decryption mark of said 1st meter & monitor information (#4), and finally date and time of processing information from clock, 18.</p> <p>When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to recorder, 16, in a predetermined fashion then discard all information of said record from its memory and to cause recorder, 16, to process and record said transferred meter record in its preprogrammed fashion.</p>
		Page 224 lines 12-18.	

X. COLUMN 10

Column 10 lines 2-4.	The controller activates digital recorder, 16, thus defining the location in memory of each of the signals and signal strings.	Page 224 lines 12-18.	<p>When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to recorder, 16, ... and to cause recorder, 16, to process and record said transferred meter record in its preprogrammed fashion.</p>
Column 10 lines 4-8.	The controller, 20, also controls the automatic telephone dialing device, 24, which can automatically output the digital information on the digital recorder, 12, to a remote site through a telephone connection, 22.	Page 273 lines 6-11.	<p>Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications.</p>
		Page 273 lines 21-25.	<p>...causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said</p>

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
			Appendix C
Column 10 lines 8-10.	The controller, 20, can also set the proper time into clock, 18, should this step be necessary.	Page 290 lines 14-16.	connection, 22, to transmit said records and information to said first computer.
Column 10 lines 10-13.	The controller, 20, operates in a predetermined fashion that can be altered by external means communicating by means of the telephone connection, 22.	Page 33 lines 18-21.	Automatically, controller, 20, checks the time of the clock, 18, of signal processor, 200, periodically. At a particular commence-enabling time that is a predetermined interval....
		Page 273 lines 16-25.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor....
Column 10 line 14.	Method of Use at an Intermediate Transmission Point	See generally page 324 line 7 to page 390 line 11.	Said instruct-to-receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20. Receiving said start signal, sent automatically in response to controller, 20's, instruct-to-receive signal, causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.
Column 10 lines 15-20.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.	Page 324 lines 8-17.	Automating Intermediate Transmission Stations
Column 10 lines 20-23.	They can be used in a facility transmitting television programming, radio programming, and making other electronic transmissions.	Page 324 lines 12-14.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. ...stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming....
Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrates one instance of such use. Figure 3 illustrates the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.	Page 324 lines 18-21.	Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
Column 10 lines 28-30.	The means for and method of transmission of programming described here is well known in the art.	Page 324 lines 21-23.	The means and methods for transmitting conventional programming are well known in the art.
Column 10 lines 30-39.	The facility receives programming from many sources.	Page 324 lines 23-31.	The station receives programming from many sources.

	Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62.		Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62.
Column 10 lines 40-41.	All of these received transmissions feed into the facility by hard-wire and...	Page 324 lines 31-33.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire....
Column 10 lines 41-42.	...connect, by means of conventional switches (here matrix switch, 75), to...	Page 324 line 34.	...a conventional matrix switch, 75, well known in the art,...
Column 10 lines 42-43.	...one or more video recorder/players, 76 and 78,...	Page 324 line 35.	...one or more recorder/players, 76 and 78,...
Column 10 lines 43-47.	...and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	Page 325 lines 1-4.	...apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.
Column 10 lines 48-49.	Programming can also be manually delivered to the facility on prerecorded video tapes and videodiscs.	Page 325 lines 5-6.	Programming can also be manually delivered to said station on prerecorded videotapes and videodiscs.
Column 10 lines 49-52.	When played on video recorder and players, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted to the field.	Page 325 lines 6-9.	When played on video recorders, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted via switch 75 to field distribution system, 93.
Column 10 lines 53-57.	In the present art, the identification of incoming programming, however received; the operation of video player and recorder equipment, 76 and 78; and the maintenance of records of programming transmissions are all largely manual operations.	Page 325 lines 10-14.	In the prior art, the identification of incoming programming, however received; the operation of video player and recorder equipment, 76 and 78; and the maintenance of records of programming transmissions are all largely manual operations.
Column 10 lines 58-60.	FIGS. 3A, 3B and 3C shows the introduction of signal processing apparatus and methods to automate these and other operations.	Page 325 lines 15-16.	Fig. 6 shows the introduction of signal processing apparatus and methods to automate these and other operations.
Column 10 lines 61-63.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62.	Page 324 lines 23-31.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming

1981 Specification Reference	1981 Language	1987 Specification Reference	1987 Language
			Appendix C
Column 10 lines 63-64	They are fed along the conventional paths described above.		transmissions are received by other programming input means, 62.
Column 10 lines 64-66.	At distribution amplifiers, 63 through 70, each incoming feed is split into two paths.	Page 324 lines 31-33.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire....
Column 10 line 66 to Column 11 line 1.	One is the conventional path whereby programming has flowed and continues to flow to recording devices, 76 and 78, and/or to flow to field distribution system, 93.	Page 325 lines 17-21.	In line between each of the aforementioned receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, and matrix switch, 75, is a dedicated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, that splits each incoming feed into two paths.
		Page 325 lines 21-24.	One path is the conventional path whereby programming flows from each given receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, to matrix switch, 75.
		Page 324 line 31 to page 325 line 4.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire to a conventional matrix switch, 75, well known in the art, that outputs to one or more recorder/players, 76 and 78, and/or to apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.

XI. COLUMN 11

Column 11 lines 1-3.	The other path flows from each distribution amplifier, 63 through 70, individually to signal processor, 71.	Page 325 lines 24-27.	The other path inputs the transmission of said given receiver/demodulator/ input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, individually to signal processor system, 71.
Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...	Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....
Column 11 lines 6-7.	...pass them, along with information identifying the channel source of each signal, externally to code reader, 72.	Page 326 lines 7-11.	...adds, ... source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.

Column 11 lines 8-10.	Signal processor, 71, also has means to record said signals and transfer them to external communications network, 97.	Page 326 lines 11-15.	Signal processor system, 71, also has signal processor means to control signal processor system, 71, to record meter-monitor information of said message information, and to transfer recorded information to external communications network, 97.
Column 11 lines 12-14.	Code reader, 72, passes the received signals, with channel identifiers, to cable program controller and computer, 73.	Page 326 lines 16-18.	Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73.
Column 11 lines 15-17.	Cable program controller and computer, 73, is the central automatic control unit for the transmission facility.	Page 326 lines 19-20.	Cable program controller and computer, 73, is the central automatic control unit for the transmission station.
Column 11 lines 18-21.	The controller/computer, 73, has means for receiving input information from local input, 74, and from remote sources via telephone or other data transfer network, 98.	Page 326 lines 27-30.	Computer, 73, has means for receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.
Column 11 lines 21-22.	Such input information might include the cable television system's complete programming schedule,...	Page 326 lines 30-31.	Such input information can include the complete programming schedule of the station of Fig. 6,....
Column 11 lines 22-24.	...with each discrete unit of programming identified with a unique program code...	Page 326 lines 31-33.	...with each discrete unit of programming identified by its own "program unit identification code" information.
Column 11 lines 25-28.	Such input information might also indicate when and where the cable head end facility should expect to receive the programming.	Page 326 lines 33-35.	Such input information can indicate when and how the station should expect to receive each program unit,....
Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit,....
Column 11 lines 32-37.	By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75.	Page 328 lines 2-7.	By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.
Column 11 lines 38-39.	By comparing identification signals on the incoming programming...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a

Appendix C			
			predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			...monitor information that identifies what programming is available,....
			Meter-monitor segments contain meter information and/or monitor information.
			...with information of the programming schedule,....
			...received earlier from input, 74, and/or network, 98, computer, 73,....
			...receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.
			...computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming....
			Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78,....
			Determining that particular incoming programming is scheduled for immediate retransmission can cause computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer said incoming programming to a scheduled output channel.
			For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information.... Receiving said message causes computer, 73, to determine ... that said "code" information matches ... schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87.
			In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75,
Column 11 line 39. Column 11 lines 39-41.	with the programming schedule.... ...received earlier from local input, 74, and/or from a remote site via network, 98,...	Page 84 lines 26-28. Page 28 lines 26-27. Page 49 lines 26-27. Page 328 lines 9-10. Page 328 line 10.	
Column 11 lines 41-43.	...controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 326 lines 28-30.	
Column 11 lines 44-46.	Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.	Page 328 lines 11-13.	
Column 11 lines 46-50.	If incoming programming is meant for immediate transmission, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer incoming programming to the proper output channel.	Page 328 lines 14-16.	
Column 11 lines 50-54.	For example, if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, ...	Page 328 lines 18-22. Page 328 lines 22-31.	
Column 11 lines 54-57.	...controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 31 to page 329 line 1.	

1987 Spec Reference	1987 Language	1987 Spec Reference	1987 Language
Appendix C			
Column 11 lines 57-60.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission,...	Page 329 line 2-20.	from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information. ... Receiving said message causes computer, 73, to determine, ... that said "code" information matches ... schedule information of programming that is scheduled to be transmitted to the field system, 93, at a later time. So ... determining causes computer, 73, ... to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
Column 11 lines 60-61.	... controller/ computer, 73, selects a video recorder/player, 76 or 78, ...	Page 329 lines 13-15.	So determining causes computer, 73, ... to select a video recorder/player, 76 or 78; ...
Column 11 lines 61-64.	... in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...	Page 329 lines 13-20.	... in its preprogrammed fashion, ... to ... record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
Column 11 lines 64-65.	... and instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 329 line 15-16.	... to cause said selected recorder, 76 or 78, to turn on and record programming. ...
Column 11 lines 66-67.	Recorder/players, 76 and 78, can communicate programming with each other through matrix switch, 75.	Page 332 lines 24-30.	... causes computer, 73, ... to cause switch, 75, to configure its switches so as to transfer the output of recorder, 76, to the input of recorder, 78. Automatically, computer, 73, then causes recorder, 76, to play and recorder, 78, to record ... unit D.
		Page 333 lines 15-21.	Computer, 73, causes ... switch, 75, to configure its switches so as to transfer the output of recorder, 78, to the input of recorder, 76. Computer, 73, causes recorder, 78, to play and recorder, 76, to record for the duration of program unit Y. ...
Column 11 line 67 to Column 12 line 1.	If controller/ computer, 73, determines at any time that it is necessary ...	Page 331 lines 17-33.	Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. ... Caused to organize the locations of said units

XII. COLUMN 12

Column 12 lines 1-3. ... to reorganize the order in which programming units are stored on either recorder/player or on both, ...	Page 331 lines 16-25.	Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. For example, four spot commercials--program units Q, Y, W, and D—are loaded on 76 and 78. D and Q are recorded on the video tape loaded on recorder; 76, with D first. W and Y are recorded on the tape on recorder, 78, with W first.
For column 12 lines 3-8 see the support provided above for column 16 line 67 to column 12 line 8.	Page 334 lines 1-6.	In this fashion, computer, 73, causes units Y and W to be located on different recorders because said units are scheduled to be transmitted simultaneously and units Y then D to be located in sequence on the same recorder because unit D is scheduled to play on the same channel immediately after Y.
If controller/ computer, 73, determines at any time that it is necessary ...	For example, page 331 lines 17-33.	Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. For example, four spot commercials--program units Q, Y, W, and D—are loaded on 76 and 78. D and Q are recorded on the video tape loaded on recorder, 76, with D first. W and Y are recorded on the tape on recorder, 78, with Q should play first on the cable channel modulated by cable channel modulator, 83; then subsequently Y and W should start to play simultaneously on the channels modulated by modulators, 83 and 87 respectively; then D should play on the channel modulated by modulator, 83, immediately after Y ends. Caused to organize the locations of said units to play according to said schedule, computer 73, ...
	For example, page 332 lines 23-31.	Determining said located space to be available causes computer, 73, to cause recorder, 76, to move forward or rewind to the start of program unit D; to cause recorder, 78, to rewind to the start of said located space; and to cause switch, 75, to configure its switches so as to transfer the

Appendix C

			<p>output of recorder, 76, to the input of recorder, 78.</p> <p>Automatically, computer, 73, then causes recorder, 76, to play and recorder, 78, to record for the duration of program unit D. ...</p> <p>Computer, 73, causes recorder, 78, to move forward or rewind to the start of program unit Y; causes recorder, 76, to rewind to the start of the available space; and causes switch, 75, to configure its switches so as to transfer the output of recorder, 78, to the input of recorder, 76. Computer, 73, causes recorder, 78, to play and recorder, 76, to record for the duration of program unit Y. ...</p> <p>In this fashion, computer, 73, causes units Y and W to be located on different recorders because said units are scheduled to be transmitted simultaneously and units Y then D to be located in sequence on the same recorder because unit D is scheduled to play on the same channel immediately after Y.</p>
Column 12 lines 8-12.	Were this head end facility equipped with automatic operating equipment well known in television studios, controller/computer, 73, could pass appropriate operating instructions to such equipment.	<p>For example, page 333 lines 15-21.</p> <p>For example, page 334 lines 1-6.</p>	<p>Executing the information of said intermediate generation set causes computer, 73, also to generate a ... video image...</p> <p>...and to organize the locations of the recorded program units, D, Q, W, and Y, to play according to the schedule inputted by said distribution station in the fashion described above (in the paragraph of the section, "AUTOMATING INTERMEDIATE TRANSMISSION STATIONS," that begins, "Computer, 73, has capacity for automatically organizing the locations of units...."</p>
Column 12 lines 13-16.	Controller/computer, 73, monitors the operation of the head end facility by means of TV signal decoders, 77, 79, 80, 84, and 88, each of which are shown in detail in Fig. 2A.	Page 327 lines 13-15.	<p>Computer, 73, monitors the operation of the head end station by means of TV signal decoders, 77, 79, 80, 84, and 88, each of which are shown in detail in Fig. 2A.</p>
Column 12 lines 16-20.	Controller/computer, 73, has means to communicate control information with each decoder, 77, 79, 80, 84, and 88, to tell each how to operate and how and where to look for signals and to communicate other information.	Page 327 lines 15-18.	<p>Computer, 73, has means to communicate control information with each decoder, 77, 79, 80, 84, and 88, to instruct each how to operate and how and where to search for SPAM information.</p>
Column 12 lines 20-23.	(This particular embodiment could be expanded to include a decrypter, such as decrypter 10 in Fig. 1, in signals-only line between each decoder, 77, 79, 80, 84, and 88, and controller/computer, 73.)	Page 327 lines 13-15.	<p>Computer, 73, monitors the operation of the head end station by means of TV signal decoders, 77, 79, 80, 84, and 88, each of which are shown in detail in Fig. 2A.</p>
		Page 36 lines 32-33.	<p>Each decoder is controlled by a controller, 39, 44, or 47.</p>

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
Appendix C			
Column 12 lines 38-41.	from programming as required.... ... and signal generators, 82, 86, and 90, also well known in the art, that controller/ computer, 73, can instruct to add signals to programming as required.	Page 354 lines 21-24.	required.... ... and signal generators, 82, 86, and 90, also well known in the art, that computer, 73, can cause to embed SPAM information as required.
Column 12 lines 45-47.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96,	Page 337 lines 1-8.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96,
Column 12 lines 47-50.	which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93.	Page 337 lines 8-12	... which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5.
Column 12 lines 50-53.	Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs.	Page 337 lines 12-19.	By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.
Column 12 lines 54-56.	Signal processors, 71 and 96, can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively.	Page 337 lines 19-21.	And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.
Column 12 lines 57-58.	This particular embodiment describes a transmission facility transmitting only television programming.	Page 339 lines 9-11.	So far this disclosure has described an intermediate transmission station that transmits conventional television programming....
Column 12 lines 58-61.	The facility could also process and transmit radio programming and other electronic data according to the methods described here ...	Page 339 lines 11-26.	... however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming.... Likewise, said station can transmit broadcast print and data communications programming by adding appropriate transmission and recorder/player means and decoder/detector means with control means and using the same processing and transmitting methods.
Column 12 lines 61-64.	... by adding radio decoder paths and other signal decoder paths, as shown in FIGS 2B and 2C respectively, to signal processors, 71 and 96, and decoders, 77, 79, 80, 84, and 88.	Page 339 lines 16-21.	... by adding radio transmission and audio recorder/player means, each with associated radio decoder means as shown in Fig. 2B, wherever television means are shown in Fig. 6, all

1987 Spec Reference	1981 Language	1987 Spec Reference	1981 Language	Appendix C
Column 12 lines 64-66.	Likewise, these methods are also applicable in a facility that transmits only a single channel of radio or television programming.		Page 339 lines 26-29.	with similar control means to that shown in Fig. 6 and by processing radio programming with appropriately embedded signals according to the same processing and transmitting methods described above.
Column 12 line 67.	Methods for Governing the Reception of Programming		See generally page 278 line 22 to page 312 line 30. See generally page 427 line 8 to page 447 line 23.	This example has described methods at a multi-channel intermediate transmission station; the methods are also applicable in a station that transmits only a single channel of television, radio, broadcast print or data. Regulating the Reception and Use of Programming

XIII. COLUMN 13

Column 13 lines 1-3.	FIGs 4A through 4E illustrate methods for governing the reception of programming and the use of signal processor apparatus in these methods.	Page 286 line 6.	Fig. 4 shows the Signal Processing Programming Reception and Use Regulating System
Column 13 lines 3-9.	All of these methods involve the use of one or more devices, of which various models exist well known in the art, for the decryption of programming transmissions and/or one or more other means for interrupting programming transmissions, also well known in the art, which may be as simple as a switch....	Page 286 line 34 to page 287 line 2.	Fig. 4 shows ... three decryptors, 107, 224 and 231, a signal stripper, 229, and, ... associated with matrix switch, 258.
Column 13 lines 9-12.	...and which may have means to interrupt programming by generating noise which noise may be an overlay of another audio and/or video transmission.	Page 279 lines 21-29.	Still other techniques, also well known in the art, involve controlling jamming means that lack authorizing information or are determined not to be duly authorized, thereby degrading the usefulness of said programming. Such other techniques include, for example, inserting so-called "noise" into the transmitted programming which noise may be, for example, overlays of one or more separate transmissions. As Fig. 4 shows, signal processor, 200, controls all the aforementioned apparatus. Signal processor, 200, controls ... matrix switch, 258; ... decryptors, 107, 224 and 230; ...
Column 13 lines 13-14.	FIG 4A shows a signal processor, 100, and a programming decrypter and/or interrupt means, 101, ...	Page 287 lines 22-27.	Automatically, controller, 20, causes matrix switch, 258, to transfer the ... video ... from said tuner, 215, ... to decryptor, 224, thereby causing said decryptor, 224, to receive ... said video, and to transfer decrypted information of said video ... to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the
Column 13 lines 14-15.	...each of which receives the same transmission of programming.	Page 299 lines 19-30.	

1987 Signal Reference	1987 Language	1987 Signal Reference	1987 Language
Column 13 lines 16-17.	The devices, 100 and 101, may receive one channel of programming or multiple channels.	Page 286 lines 9-12	<p>information inputted from decryptor, 224, to ... signal processor, 200,</p> <p>The subscriber station of Fig. 4 has capacity for receiving wireless television programming transmissions at a conventional antenna, 199, and a multi-channel cable transmission at converter boxes, 201 and 222.</p>
Column 13 lines 17-20.	The signals that enable the decrypter/interrupter, 101, to decrypt and/or transfer programming uninterrupted may be embedded in the programming or may be elsewhere.	Page 291 lines 9-24	<p>In the interval between said commence-enabling time and said 8:30 PM time, said head end is caused, ... to transmit a particular enabling SPAM message that consists of ... enable-CC13 instructions and particular enable-WSW instructions that include particular enable-WSW-programming information, ... on the frequency of said master control channel. (Hereinafter said message is called the "local-cable-enabling-message (#7):")</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...</p>
		Page 289 lines 22-27	<p>In example #7, the controller, 20, of the signal processor, 200, of Fig. 4 is preprogrammed at a particular time with particular information that indicates that the subscriber of said station wishes to view said "Wall Street Week" program when transmission of said program on cable cable 13 commences.</p>
		Page 290 lines 28-29	<p>particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system</p>
		Page 298 lines 17-21.	<p>Executing said 1st-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions, to affect a first stage of decrypting the video information of the "Wall Street Week" program transmission.</p>
		Page 299 lines 19-22.	<p>Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, ...</p>
Column 13 lines 20-21.	Signal processor, 100, identifies, evaluates, possibly decrypts, and passes...	Page 15 lines 7-31.	<p>In the present invention, particular signal processing apparatus (hereinafter called the "signal processor") detect</p>

Appendix C

signals and, ... The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; **decryptors** that may ... and one or more processor/monitors and/or buffer/comparators that organize and transfer the information stream. The processors and buffers can have inputs from each of the receiver/detector lines and evaluate information continuously. From the processors and buffers, the signals may be **transferred** to external equipment such as computers....

Automatically, controller, 20, causes matrix switch, 258, to transfer the information of said audio portion inputted from said tuner, 215, to the output that outputs to a selected decryptor, 107, thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio). Automatically, controller, 20, selects information of cipher key Ca from among the information of said portion; transfers said cipher key information to decryptor, 107; and, causes decryptor, 107, to commence decrypting its received audio information, using said key information and selected decryption cipher algorithm....

The second message conveys the second combining synchronizing command. In example #2, before said message is embedded at the program originating studio and transmitted, the execution segment of said command and all of the meter-monitor segment except for the length-token are encrypted, using standard encryption techniques, well known in the art, that encrypt binary information without altering the number of bits in said information. Partially encrypting the second message in this fashion leaves the cadence information of said message unencrypted. In other words, the "00" header, the length- token, and any padding bits added at the end of said message remain unencrypted. Said message is only partially encrypted in order to enable subscriber stations that lack capacity to decrypt said message to process the cadence information of said message accurately.

In example #2, the encryption of said execution segment is done in such a fashion that, after encryption, said segment is

...a signal or signals to decryptor/interrupter, 101, either at the time of receipt of such programming...

Column 13 lines 21-23.

Page 295 lines 24-35.

See also page 143, lines 10-30.

Appendix C

		297 lines 23-29, Thus preventing through erasure page 301 lines 32-34 And page 310 lines 20-24.	enable-WSW-program instructions ... (Hereafter said message is called the "1st-WSW-program-enabling-message (#7).") Resulting in a match causes controller, 20, to execute a particular portion of said 1st-stage-enable-WSW-program instructions. ... microcomputer, 205, to commence transferring the decrypted information of the transmitted video image to monitor, 202M, thereby causing monitor, 202M, to commence displaying, at its television picture tube, the information of the transmitted television image. Receiving said check-data-loaded signal causes controller, 20, under control of said 1st-stage-enable-WSW-program instructions, to cause the control processor, 39J,.... A match occurs at the station of Fig 4, indicating that decryptor, 224, is decrypting its received information correctly. Resulting in a match causes controller, 20, to execute a particular portion of said 1st-stage-enable-WSW-program instructions. Receiving said check-data-loaded signal causes controller, 20, under control of said 1st-stage-enable-WSW-program instruct microcomputer, 205, to commence transferring the decrypted information of the transmitted video image to monitor, 202M, thereby causing monitor, 202M, to commence displaying, at its television picture tube, the information of the transmitted television image. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of said audio portion inputted from said tuner, 215, to the output that outputs to a selected decryptor, 107, thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio). Automatically, controller, 20, selects information of cipher key Ca from among the information of said portion; transfers said cipher key information to decryptor, 107; and causes decryptor, 107, to commence decrypting its received audio information, using said key information and selected
Column 13 line 27.	...or not to interrupt the transmission.	Page 300 lines 30-32 Page 301 lines 1-3 Page 301 lines 32-34 with respect to page 310 lines 20-24.	
Column 13 lines 27-29.	The signal or signals may also inform decrypter/interrupter, 101, how to decrypt...	Page 295 line 24 to page 296 line 3.	

Appendix C

		Page 54 lines 2-6. Page 294 lines 28-35. Page 295 line 27 to page 296 line 2.	of the information segment of said message at particular RAM of controller, 20, and execute said instructions as the machine language instructions of one job. An information segment can transmit any information that a processor can process. It can transmit compiled machine language code or assembly language code or higher level language programs, all of which are well known in the art. Resulting in a match causes controller, 20, to execute a particular portion of said enable-CC13 instructions. Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission,.... ...thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio). Automatically, controller, 20, selects information of cipher key Ca from among the information of said portion, transfers said cipher key information to decryptor, 107; and causes decryptor, 107, to commence decrypting its received audio information, using said key information and selected decryption cipher algorithm C, and outputting decrypted information of the audio portion of the "Wall Street Week" program.... Finally, Fig. 4 shows local input, 225, well known in the art, which has means for generating and transmitting control information to controller, 20, of signal processor, 100. The function of local input, 225, is to provide means whereby a subscriber may input information to the signal processor of his subscriber station, thereby controlling the functioning of his personal signal processor system is specific predetermined fashions that are described more fully below.
Column 13 lines 33-35.	FIG 4A also shows local input, 102, with means for generating and transmitting signals to signal processor, 100.	Page 288 lines 1-4.	
Column 13 lines 35-36.	Local input, 102, is intended to permit a person at a local receiving site...	Page 288 lines 4-9.	
Column 13 lines 36-37.	...that is prevented, by any means, from receiving programming...	Page 286 lines 6-8.	Fig. 4 shows the Signal Processing Programming Reception and Use Regulating System that is the third feature of the present invention.
Column 13 lines 37-39.	...to instruct signal processor, 100, that the site wants to be enabled to receive the programming.	Page 289 lines 22-33.	In example #7, the controller, 20, of the signal processor, 200, of Fig. 4 is preprogrammed at a particular time with

Appendix C

			particular information that indicates that the subscriber of said station wishes to view said "Wall Street Week" program when transmission of said program on cable cable 13 commences. (So preprogramming controller, 20, can occur in several fashions. For example, prior to a particular time, a subscriber may enter particular please-fully-enable-WSW-on-CC13-at-particular-8:30 information at local input, 225, and cause said information, in a predetermined fashion, to be inputted to controller, 20, by local input, 225.
Column 13 lines 39-40.	Local input, 102, may also serve other purposes.	Page 395 lines 30-33.	Local input, 225, has capacity to input control instructions to signal processor, 200, and enables the subscriber of the station of Fig. 7 to manually input control instructions at any relevant time.
Column 13 lines 40-41.	Local input, 102, may convey a continuous signal or an occasional signal or a one-time-only signal.	Page 289 lines 29-33.	For example, prior to a particular time, a subscriber may enter particular please-fully-enable-WSW-on-CC13-at-particular-8:30 information at local input, 225, and cause said information, in a predetermined fashion, to be inputted to controller, 20, by local input, 225.
		Page 395 lines 30-33.	Local input, 225, has capacity to input control instructions to signal processor, 200, and enables the subscriber of the station of Fig. 7 to manually input control instructions at any relevant time.
Column 13 lines 42-43.	It may be activated by one or more switches or buttons or combinations.	Page 288 lines 9-13.	In the preferred embodiment, local input, 225, is actuated by keys that are depressed manually by the subscriber in the fashion of the keys of a so-called touch-tone telephone or the keys of a typewriter (or microcomputer) keyboard.
Column 13 lines 43-44.	It may be a computer acting in a predetermined fashion.	Page 288 lines 13-20.	As Fig. 4 shows, microcomputer, 205, also has capacity for inputting control information ... and in the preferred embodiment, microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.
Column 13 lines 44-47.	The signal may be input to signal processor, 100, as described in FIG 1, at buffer/comparator, 8, or signal processor or monitor, 12, or buffer/comparator, 14.	Page 289 lines 29-33.	For example, prior to a particular time, a subscriber may enter particular please-fully-enable-WSW-on-CC13-at-particular-8:30 information at local input, 225, and cause said information, in a predetermined fashion, to be inputted to controller, 20, by local input, 225.
Column 13 lines 48-53.	In the preferred embodiment, local input, 102, inputs a one-	Page 288 lines 9-13.	In the preferred embodiment, local input, 225, is actuated by

Appendix C

	time signal to signal processor, 100, at buffer/ comparator, 8, and transmits information in a digital code signal which information is input to local input, 102, in an alphanumeric form manually by means of buttons.	Page 286 lines 6-7.	keys that are depressed manually by the subscriber in the fashion of the keys of a so-called touch- tone telephone or the keys of a typewriter (or microcomputer) keyboard.
Column 13 lines 54-56.	FIGs 4B and 4C illustrate various alternative ways that signals may be input to the signal processor, 100, 103, or 106 as applicable.	Page 311 lines 17-28.	Fig. 4 shows the Signal Processing Programming Reception and Use Regulating System ...
Column 13 lines 56-60.	The fundamental point is that signals may be received in a manner that requires decryption and/or transmission by a decryptor/interruptor, 104, before they reach the signal processor, as with signal processor 103 in FIG 4B,	Page 299 lines 19-31.	It is obvious to one of ordinary skill in the art that the foregoing is presented by way of example only and that the invention is not to be unduly restricted thereby since modifications may be made in the structure of the various parts without functionally departing from the spirit of the invention. ... And for example, the transmitted programming may be processed through fewer than three steps of decryption or more than three.
Column 13 lines 60-61.	...or they may not, as with signal processor 100 in FIG 4A,...	Page 291 lines 9-24.	Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video ... from said tuner, 215, ... to decryptor, 224, thereby causing said decryptor, 224, to receive the information of said video portion ... , to decrypt said information, and to transfer decrypted information of said video ... to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information inputted from decryptor, 224, to the output that that outputs to signal processor, 200, thereby causing signal processor, 200, to receive said information ...
		Page 289 lines 25-27.	In the interval between said commence-enabling time and said 8:30 PM time, said head end is caused, ... , to transmit a particular enabling SPAM message that consists of ... particular enable-CCI3 instructions and particular enable-WSW instructions that include particular enable-WSW-programming information, and an end of file signal on the frequency of said master control channel. (Hereinafter said message is called the "local-cable-enabling-message (#7).") In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, said "Wall Street Week" program when transmission of said program on cable cable 13 commences.

Appendix C

		Page 290 lines 28-29.	...particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system....
Column 13 lines 61-62.	...or some combination, as with signal processor 106 in FIG 4C.	Page 291 lines 9-28.	In the interval between said commence-enabling time and said 8:30 PM time, said head end is caused, ..., to transmit a particular enabling SPAM message that consists of ... particular enable-CC13 instructions and particular enable-WSW instructions that include particular enable-WSW-programming information, and an end of file signal on the frequency of said master control channel. (Hereinafter said message is called the "local-cable-enabling-message (#7)".)
			In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, select the information of the execution segment in said message, and determine that said selected information matches the aforementioned instance of enable-next-program-on-CC13 information at said particular controlled-function-invoking information location.
		Page 289 lines 25-27.	... "Wall Street Week" program when transmission of said program on cable cable 13 commences.
		Page 290 lines 28-29.	...particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system....
		Page 299 lines 19-31	Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video ... from said tuner, 215, ... to decryptor, 224, thereby causing said decryptor, 224, to receive the information of said video portion ..., to decrypt said information, and to transfer decrypted information of said video ... to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information inputted from decryptor, 224, to the output that that outputs to signal processor, 200, thereby causing signal processor, 200, to receive said information
Column 13 lines 63-68.	However, FIGs 4A, 4B, and 4C do not fully illustrate this point because these figures do not reveal that the question of the need for decryption prior to reaching the signal processor depends, among other things, on where the signal or signals	Page 149 line 27 to page 150 line 6.	Decryptor, 10, commences receiving said information, decrypting it using said key J information and transferring it to controller, 12, as quickly as controller, 12, accepts it. The process of decryption proceeds in a particular fashion. Said

Appendix C

	are placed in the incoming transmission.		decrypt-a-00-header-message instructions cause controller, 20, to cause decryptor, 10, to transfer the first H bits without decrypting or altering said bits in any fashion, to decrypt and transfer the next X bits, to transfer the next L bits without decrypting or altering said bits, to decrypt and transfer the next MMS-L bits, and finally, to transfer any bits remaining after the last of said MMS-L bits without decrypting or altering said bits. In this fashion, the padence information in said message, which is not encrypted, is transferred by decryptor, 10, to controller, 12, without alteration.
Column 13 line 68 to column 14 line 1.	A decryptor does not necessarily decrypt the entire transmission.	Page 149 line 27 to page 150 line 6.	Decryptor, 10, commences receiving said information, decrypting it using said key J information and transferring it to controller, 12, as quickly as controller, 12, accepts it. The process of decryption proceeds in a particular fashion. Said decrypt-a-00-header-message instructions cause controller, 20, to cause decryptor, 10, to transfer the first H bits without decrypting or altering said bits in any fashion, to decrypt and transfer the next X bits, to transfer the next L bits without decrypting or altering said bits, to decrypt and transfer the next MMS-L bits, and finally, to transfer any bits remaining after the last of said MMS-L bits without decrypting or altering said bits. In this fashion, the padence information in said message, which is not encrypted, is transferred by decryptor, 10, to controller, 12, without alteration.

XIV. COLUMN 14

Column 14 lines 1-2.	Encrypted transmissions may be only partially encrypted.	Page 288 line 30 to page 289 line 4.	In example #7, the program originating studio that originates the "Wall Street Week" transmission transmits a television signal that consists of so-called "digital video" and "digital audio," well known in the art. Prior to being transmitted, the digital video information is doubly encrypted, ... The digital audio is transmitted in the clear. Prior to being transmitted, the digital video information is doubly encrypted, ... The digital audio is transmitted in the clear.
Column 14 lines 2-3.	For example, only the video portion of the transmission may be encrypted.	Page 288 line 33 to page 289 line 3.	
Column 14 lines 4.	The audio portion may remain unencrypted.	Page 289 lines 3-4.	The digital audio is transmitted in the clear.
Column 14 lines 4-9.	In such a circumstance, a connection such as that shown in FIG 4B could pass unencrypted signals to signal processor 103, while passing a transmission unsuitable for satisfactory viewing, if the signals were placed in the audio portion of the overall transmission.	Page 297 lines 20-32.	Subsequently, but still in the interval between said commence-enabling time and said 8:30 PM time, said program originating studio embeds in the audio portion and transmits a particular SPAM message that consists of ... particular 1st-stage-enable-WSW-program instructions as the

			information segment information, and an end of file signal. (Hereinafter said message is called the "1st-WSW-program-enabling-message (#7).") In the fashions described above, so transmitting said SPAM message causes signal processor, 200, ... to detect the information of said message ...
Column 14 lines 10-12.	...a method that provides a signal or signals to signal processor, 106, prior to decryption...	Page 291 lines 9-24.	In the interval between said commence-enabling time and said 8:30 PM time, said head end is caused, in a predetermined fashion, to transmit a particular enabling SPAM message that consists of ... enable-CC13 instructions and ... enable-WSW instructions ... on the frequency of said master control channel. (Hereinafter said message is called the "local-cable-enabling-message (#7).") In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message....
Column 14 lines 12-14.	...which signal or signals enables decryptor/interruptor, 107, to decrypt and/or pass programming transmissions it receives...	Page 294 line 28 to page 295 line 34.	Resulting in a match causes controller, 20, to execute a particular portion of said enable-CC13 instructions. Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission, ... thereby causing said tuner, 215, to receive the information of cable channel 13 and output the audio and video portions of said information to matrix switch, 258, on the separate audio and video outputs of said tuner, 215. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of said audio portion inputted from said tuner, 215, to the output that outputs to a selected decryptor, 107, thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio). Automatically, controller, 20, ... causes decryptor, 107, to commence decrypting its received audio information. ...
Column 14 lines 14-17.	...then signal processor, 106, searches in a predetermined fashion for a second signal or set of signals in the decrypted output of decryptor/interruptor, 107.	Page 296 lines 3-23.	Automatically, controller, 20, causes matrix switch, 258, to transfer the information inputted from decryptor, 107, to the output that that outputs to signal processor, 200, thereby causing signal processor, 200, to receive said information at a particular third alternate contact of switch, 1, (that is not shown in Fig. 2). Automatically, controller, 20, ... causes

Appendix C

		Page 300 lines 10-21.	switch, 1, to connect to said third contact, thereby inputting said information to mixer, 3; and causes mixer, 3, (by control transmission means via oscillator, 6) to transfer said information without any modification; causes the control processor, 39J, of decoder, 30, to cause the filter, 31, and modulator, 32, to transfer said information without any modification; causes said control processor, 39J, ... to cause digital detector, 38, to commence inputting detected information to controller, 39; and causes said control processor, 39J, to commence waiting to receive the header information of a SPAM message.
Column 14 lines 17-21.	If this second signal or set of signals fails to appear in the form or forms and place or places and time or times that signal processor, 106, expects, signal processor, 106, can respond in a predetermined fashion and generate...	Page 301 lines 4-31.	In due course, but still before said 8:30 PM time, said program originating studio embeds in the video portion and transmits particular SPAM check information that is not a SPAM message and consists only of a particular check sequence of binary information followed by an end of file signal. (Hereinafter said SPAM check information is called the "1st- WSW-decryption-check (#7).") ... Receiving the binary information of said check sequence at decoder, 30, causes digital detector, 38, to detect said information and causes control processor, 39J, to ... (Simultaneously other stations compare selected information of said check sequence to selected information of said 1st-stage-enable-WSW-program instructions. At each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly and suggests that the preprogrammed SPAM operating information of said station may have been tampered with--not resulting in a match causes the controller, 20, of said station ... then to transmit the aforementioned appearance-of-tampering information together with complete information of the unique digital code that identifies said station uniquely. ... thereby disabling said apparatus.) Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites.
Column 14 lines 21-22.	...and record in digital recorder, 16 (referring to Fig. 1)...	Page 31 line 30 to page 32 line 2.	

Appendix C

Column 14 lines 22-25.	... information that reports this fact in a predetermined fashion and/or transfer this information immediately to a remote site by telephone means and/or ...	Page 301 lines 4-25.	... , then to ... , to cause the auto dialer, 24, and telephone connection, 22, of said station to establish telephone communications with a particular predetermined remote station, in the fashion described above, and causes controller, 20, then to transmit the aforementioned appearance-of-tampering information together with complete information of the unique digital code that identifies said station uniquely. ...
Column 14 lines 25-27.	generate and transmit to decryptor/interruptor, 107, instructions that disable decryptor/interruptor, 107.	Page 311 line 33 to page 312 line 4.	And for example, determining that a local station is not preprogrammed properly and/or that decryption ... apparatus are not functioning correctly may cause apparatus of said station to perform other steps of disabling and/or communicating--eg., the local apparatus may disable local apparatus selectively and only partially by, for example, preventing a decoder, ...
		Page 301 lines 4-31.	(Simultaneously other stations compare selected information of said check sequence to selected information of said 1st-stage-enable-WSW-program instructions. At each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly and suggests that the preprogrammed SPAM operating information of said station may have been tampered with--not resulting in a match causes the controller, 20, of said station to cause all information of said 1st-WSW-program- enabling-message (#7) to be erased from all memory of said station ... thereby disabling said, apparatus.)
Column 14 lines 28-32.	FIG 4D shows that a multi-stage decryption/interruption process may be used in which transmissions must be processed by one or more additional decryptor/interruptors, 111, that follow decryptor/interruptor, 110.	Page 299 lines 13-27.	Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and outputting decrypted information to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, thereby causing said decryptor, 224, to receive the information of said video portion (said information being, as explained above, encrypted digital video), to decrypt said information, and to transfer decrypted information of said video portion to

Appendix C

		Page 305 lines 9-31.	matrix switch, 258. Executing said 2nd-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions, ... to affect a second and last stage of decrypting the digital video information of the "Wall Street Week" program transmission. ... Automatically, controller, 20, causes matrix switch, 258, ... to commence transferring the information inputted from decryptor, 224, to the output that outputs ... to decryptor, 231; ...
Column 14 lines 33-35.	FIG 4E illustrates that the signal processor, 112, can monitor multiple channels and pass instructions to multiple decryptor/interruptors,...	Page 308 lines 19-20. Page 29 lines 8-15.	...indicating that decryptors, 224 and 231, are decrypting received information correctly. At switch, 1, and mixers, 2 and 3, signal processor, 26, monitors all frequencies or channels available for reception at the subscriber station of Fig. 2 to identify available programming. The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.
		Page 287 lines 22-29.	As Fig. 4 shows, signal processor, 200, controls all the aforementioned apparatus. Signal processor, 200, controls ... decryptors, 107, 224 and 230; ...
Column 14 lines 35-37.	...each of which processes fewer channels than the multiple channels processed by signal processor, 112.	Page 299 lines 13-27.	Automatically, controller, 20, ... causes decryptor, 224, to commence decrypting any received information, ... and outputting decrypted information to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer ... the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, thereby causing said decryptor, 224, to receive the information of said video portion (said information being, as explained above, encrypted digital video), to decrypt said information, and to transfer decrypted information of said video portion to matrix switch, 258.
		Page 305 lines 9-32.	Executing said 2nd-stage-enable-WSW-program instructions causes controller, 20, ... to commence transferring the information inputted from decryptor, 224, to the output that outputs to signal stripper, 229; to commence transferring the information inputted from signal stripper, 229, to the output that outputs to signal generator, 230; to commence transferring the information inputted from signal

Appendix C

		Page 29, lines 8-11	generator, 230, to the output that outputs to decryptor, 231; and to commence transferring the information inputted from decryptor, 231, to
			At switch, 1, and mixers, 2 and 3, signal processor, 26, monitors all frequencies or channels available for reception at the subscriber station of Fig. 2 to identify available programming.
Column 14 lines 37-39.	FIG 4E illustrates how signals transmitted on one channel can govern the decryption and/or transfer of another channel.	Page 291 lines 10-24.	...said head end is caused, in a predetermined fashion, to transmit a particular enabling SPAM message that consists of ... enable-CC13 instructions ... on the frequency of said master control channel. (Hereinafter said message is called the "local- cable-enabling-message (#7).") In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message,...
		Page 289 lines 25-27.	... said "Wall Street Week" program when transmission of said program on cable cable 13 commences. ...
		Page 290 lines 27-29.	...to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system...
		Page 294 lines 28-35.	Resulting in a match causes controller, 20, to execute a particular portion of said enable-CC13 instructions. Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission, ...
Column 14 lines 39-41.	Signal processor, 112, receives, evaluates, and processes a multiple channel transmission from cable transmission facility, 113.	Page 115 lines 7-31.	In the present invention, particular signal processing apparatus (hereinafter called the "signal processor") detect signals and, ... The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; decryptors that may ... and one or more processor/monitors and/or buffer/comparators that organize and transfer the information stream. The processors and buffers can have inputs from each of the

Appendix C

		289 lines 12-15.	receiver/detector lines and evaluate information continuously. From the processors and buffers, the signals may be transferred to external equipment such as computers, ...
Column 14 lines 42-43.	Cable converter box, 114, of which many types are now available,...	Page 295 line 8.	In example #7, the intermediate station that retransmits "Wall Street Week" program information to the subscriber station of Fig. 4 is a cable television system head end (such as the head end of Fig. 6).
Column 14 lines 43-44.	...with means for informing signal processor, 112, which channel of programing it is transferring...	Page 295 line 6 to page 296 line 7.	...converter box, 201,
Column 14 lines 45-46.	...receives the same multi-channel transmission and transfers one channel to decryptor/interruptor, 115.	Page 295 lines 6-29.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its received information of said frequency (which information is received by means of its multi-channel cable system transmission input) to a selected output frequency and transfer said information at said frequency to matrix switch, 258. ... Automatically, controller, 20, causes matrix switch, 258, to transfer the information inputted from said box, 201, to the output that outputs to television tuner, 215, and causes said tuner, 215, to tune to said selected frequency, thereby causing said tuner, 215, to receive the information of cable channel 13 and output the audio and video portions of said information to matrix switch, 258, on the separate audio and video outputs of said tuner, 215. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of said audio portion inputted from said tuner, 215, to the output that outputs to a selected decryptor, 107, thereby causing said decryptor, 107, to receive the information of said audio portion....
Column 14 lines 46-49.	The signal or signals necessary for the decryption of the channel that box, 114, passes to decryptor/interruptor, 115,...	Page 299 lines 13-25.	Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received

Appendix C

			information, using said key information and selected decryption cipher algorithm B, and outputting decrypted information to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, thereby causing said decryptor, 224, to receive the information of said video portion (said information being, as explained above, encrypted digital video), to decrypt said information,....
Column 14 lines 49-50.	...in this case, is not located in the channel transmission.	Page 298 line 34 to page 299 line 1.	At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba.
Column 14 lines 50-51.	They may be preprogrammed into the signal processor (for example,...	Page 299 lines 13-17.	Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B,....
		Page 298 line 33 to page 299 line 1.	At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba.
Column 14 lines 51-52.	...in programmable random access memory controller, 20, in Fig. 1)...	Page 293 line 20.	...such as, for example, the RAM of controller, 20,....
Column 14 lines 52-54.	...or they may be transmitted in a channel other than the channel being transferred from box, 114.	Page 291 lines 10-20.	...said head end is caused, in a predetermined fashion, to transmit a particular enabling SPAM message that consists of ... enable-CC13 instructions and ... enable-WSW instructions that include particular enable-WSW-programming information, ... on the frequency of said master control channel. (Hereinafter said message is called the "local- cable-enabling-message (#7).") ...
		Page 289 lines 25-27.	... said "Wall Street Week" program when transmission of said program on cable cable 13 commences. ...
		Page 290 lines 28-29.	...particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system....
		Page 294 lines 28-35.	Resulting in a match causes controller, 20, to execute a particular portion of said enable-CC13 instructions.

Appendix C

			Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission,....
Column 14 lines 54-55.	If signal processor, 112, has been preprogrammed with the signal or signals...	Page 298 line 33 to page 299 line 1.	At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba. ...
Column 14 lines 55-58.	...or if it has been informed of the predetermined fashion for identifying and processing the needed signal or signals in the incoming transmission from facility, 113,...	Page 289 line 22 to page 290 line 10.	In example #7, the controller, 20, of the signal processor, 200, of Fig. 4 is preprogrammed at a particular time with particular information that indicates that the subscriber of said station wishes to view said "Wall Street Week" program when transmission of said program on cable cable 13 commences. ... Receiving any given instance of please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to select particular WSW-on-CC13-at-particular-8:30 information in said received information, record said selected information at particular memory, and execute particular receive-authorizing-info-at-appointed-time instructions. ...
Column 14 lines 58-59.	...for example, where to look for the signals...	Page 290 lines 11-12.	In a predetermined fashion, executing said instructions causes controller, 20,.... ...causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200,....
		Page 290 lines 26-30. OR Page 298 lines 17-18.	Executing said 1st-stage-enable-WSW-program instructions causes controller, 20,....
		Page 298 line 34 to page 299 line 1.	At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba. ...
Column 14 line 59.	...and when...	Page 290 lines 11-17. OR	In a predetermined fashion, executing said instructions causes controller, 20, causes prepare to receive a particular enabling SPAM message at a particular time. Automatically, controller, 20, checks the time of the clock, 18, of signal processor, 200, periodically. At a particular

		Page 297 lines 20-21.	commence-enabling time that is a predetermined interval prior to the aforementioned 8:30 PM time....
Column 14 line 59.	...and how,...	Page 290 lines 11-12, lines 21-26.	Subsequently, but still in the interval between said commence-enabling time and said 8:30 PM time, ... In a predetermined fashion, executing said instructions causes controller, 20,.... ...transmits particular preprogrammed enable-next-program-on-CC13 information to the control processor, 39J, of said decoder, 30, and causes said control processor, 39J, to place one instance of said information at a particular controlled-function-invoking information location; causes the oscillator, 6,.... In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, select the information of the execution segment in said message, and determine that said selected information matches the aforementioned instance of enable-next-program-on-CC13 information at said particular controlled-function-invoking information location. ...
Column 14 lines 59-61.	...signal processor, 112, can transfer the signal to decryptor/interruptor, 115.	Page 295 line 30 to page 296 line 1.	Automatically, controller, 20, selects information of cipher key Ca from among the information of said portion; transfers said cipher key information to decryptor, 107; and causes decryptor, 107, to commence decrypting its received audio information, using said key information and selected decryption cipher algorithm C, and outputting decrypted information of the audio portion.... Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and outputting decrypted information to matrix switch, 258. ...
Column 14 line 61 to column 15 line 1.	The tuner, 119, informs signal processor, 112, what channel box, 114, is switched to whenever it is switched or turned on. Signal processor, 112, receives this information probably at buffer/comparator, 8 (referring to Fig. 1), which signal processor, 112, processes the signal from tuner, 119, in a	Page 295 line 6 to page 296 line 7.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its received information of said frequency (which information is received by means of its multi-channel cable system

Appendix C

	predetermined fashion that causes the signal or signals that relate to the necessary proper operation of decryptor/interruptor, 115.		transmission input) to a selected output frequency and transfer said information;... thereby causing signal processor, 200, to receive said information
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XV. COLUMN 15

Column 15 lines 1-4.	If signal processor, 112, can identify, processes, and transfer the needed signal or signals, decryptor/interruptor, 115, can decrypt and/or transfer the incoming transmission from box, 114, satisfactorily.	Page 291 lines 21-32.	In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, select the information of the execution segment in said message, and determine that said selected information matches the aforementioned instance of enable-next-program-on-CC13 information at said particular controlled-function-invoking information location. So determining a match causes the control processor, 391, to execute particular preprogrammed transfer-this-message-to-controller-20 instructions that are associated with the instance of information at said particular location.
Column 15 lines 4-7.	If signal processor, 112, cannot transfer the needed signal or signals, decryptor/interruptor, 115, cannot decrypt and/or transfer the programming transmission satisfactorily.	Page 294 lines 28-35.	Resulting in a match causes controller, 20, to execute a particular portion of said enable-CC13 instructions. Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission;....
Column 15 lines 8-9.	FIG 4E also illustrates how it may be necessary to decrypt a programming transmission on one channel...	Page 301 lines 6-10.	At each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly and suggests that the preprogrammed SPAM operating information of said station may have been tampered with....
		Page 294 lines 30-35.	Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission;....
		Page 295 lines 6-30.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its

Appendix C

			received information of said frequency (which information is received by means of its multi-channel cable system transmission input) to a selected output frequency and transfer said information at said frequency to matrix switch, 258. ... Automatically, controller, 20, causes matrix switch, 258, to transfer the information of said audio portion ... to a selected decryptor, 107, thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio).
Column 15 lines 9-11.	...in order to identify and process correctly the programming transmitted on another.	Page 300 lines 10-12,	In due course, but still before said 8:30 PM time, said program originating studio embeds in the video portion and transmits particular SPAM check information....
		Page 300 line 30 to page 301 line 3.	Receiving said check-data-loaded signal causes controller, 20, under control of said 1st-stage-enable-WSW-program instructions, to cause the control processor, 391, of decoder, 30, to transfer to controller, 20, selected information of said check sequence of binary information and compare said selected information to selected information of said 1st-stage-enable-WSW-program instructions. A match occurs at the station of Fig 4, indicating that decryptor, 224, is decrypting its received information correctly.
		Page 299 lines 19-23.	... controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video ... to decryptor, 224, thereby causing said decryptor, 224, to receive the information of said video....
Column 15 lines 11-12.	In Fig. 4E, the signal or signals needed to operate decryptor/interruptor, 115, correctly...	Page 298 lines 17-21.	Executing said 1st-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions, to affect a first stage of decrypting the video information of the "Wall Street Week" program transmission.
		Page 299 lines 13-18.	Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and outputting decrypted information to matrix switch, 258.
Column 15 lines 13-14.	...may be on a separate channel of programming that is, itself, encrypted in transmission.	Page 297 lines 20-29.	Subsequently, but still in the interval between said commence-enabling time and said 8:30 PM time, said

	a predetermined fashion...	Page 293 lines 32-35. Page 301 lines 6-9. Page 308 line 35 to page 309 line 3.	apparatus are not functioning correctly may cause apparatus of said station to perform other steps of disabling and/or communicating.... At each station where a match fails to occur--which suggests that the preprogrammed SPAM operating information of said station has been tampered with in an unauthorized fashion.... ... each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly.... At each station where a ... a match does not result--which indicates that a decryptor, 224 or 231, is not decrypting its received information correctly.... ... may interrogate remote station apparatus, by telephone, for cipher key and/or cipher algorithm instructions and information.
Column 15 lines 22-25.	...and telephone a remote site to get an additional signal or signals necessary for the proper decryption and/or transfer of incoming programming transmissions.	Page 312 lines 6-8.	Monitoring Receiver Station Reception and Operation
Column 15 line 26.	Methods for Monitoring Reception and Operation	See generally page 162 line 27 to page 193 line 10, and page 312, line 32 to page 324 line 5.	
Column 15 lines 27-30.	FIG 5 illustrates methods for monitoring reception and operation which methods can be used to gather statistics on programming usage and associated uses of other data transmissions and equipment.	Page 28 lines 25-29. Page 312 line 33 to page 313 line 8.	[Signal processor 200 in Fig. 7 and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local apparatus receives programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing ...
Column 15 lines 30-32.	Such statistics are necessary, for example, in the development of television program ratings.	Page 28 lines 29-35.	[Signal processor 200 in Fig. 7 and elsewhere] has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.

Appendix C

		Page 162 lines 31-34.	... signal processing apparatus and methods are used to collect monitor information for so-called "program ratings" (such as so-called "Nielsen ratings") that estimate the sizes of television (or radio) program audiences.
Column 15 lines 33-39.	FIG 5 shows two conventional TV sets, 132 and 144, a conventional video cassette recorder, 135, a conventional videodisc player, 137, a conventional radio, 141, a conventional microcomputer, 142, a conventional data printer, 146, and a television set, 148, that is capable of displaying two different television programming transmissions at once.	Page 313 line 16 to page 314 line 16.	Fig. 5 shows a variety of input apparatus with capacity for inputting programming (including SPAM information) selectively, via matrix switch, 258, to apparatus of the subscriber station of Fig. 5, intermediate apparatus with capacity for processing and/or recording inputted programming selectively, and output apparatus for displaying or otherwise outputting programming selectively to human senses. Input apparatus include ... Laser disc player, 232, ... videodisc player" ... Intermediate apparatus include microcomputer, 205, radio tuner & amplifier, 213, TV tuner, 215, audio recorder/player, 255, and video recorder/player, 217, all of which are well known in the art ... Output apparatus that display or otherwise output programming selectively to human senses include, for example, TV monitor, 202M, multi-picture television monitor, 148, speaker system, 263, and printer, 221, ... (This is only a representative group of equipment; many other types of communications and computer apparatus could be included in Fig. 5.)
Column 15 lines 39-41.	This is only a representative group of equipment. Many other types of television and radio players and recorders could be included in FIG 5.	Page 314 lines 17-19.	
Column 15 lines 42-43.	Except for the videodisc player which neither records nor displays programming or other data...	Page 313 lines 24-30.	Input apparatus include ... Laser disc player, 232, ... videodisc player" ...
Column 15 lines 43-44.	... each unit has an appropriate associated signal decoder.	Page 314 lines 20-21.	Associated with each intermediate apparatus and output apparatus is one or more appropriate decoders.
Column 15 lines 44-46.	Each decoder is likely to be located physically inside its associated player/ recorder unit.	Page 314 lines 31-33.	At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.
Column 15 lines 46-49.	Each is located at a point in the associated unit's circuitry where it receives every embedded signal on the programming channel or data channel to which the unit is tuned...	Page 315 lines 14-19.	In the preferred embodiment, each one of said decoders is located at a point in the circuitry of its associated apparatus where said one receives (so as to detect all SPAM information on) the information of the selected frequency, channel or transmission to which its associated apparatus is tuned.
Column 15 lines 49-51.	...for which signal the decoder is programmed in a predetermined fashion to search.	Page 315 lines 20-24.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM

Appendix C

			message in the transmission to which its associated apparatus is tuned.
Column 15 lines 52-56.	If a unit like the microcomputer can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have sufficient apparatus to monitor every channel and kind of transmission it can receive.	Page 317 lines 2-6.	If a given intermediate or output apparatus can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have sufficient apparatus to monitor every channel and kind of transmission it can receive.
Column 15 line 57.	The signals for which the decoders are monitoring...	Page 315 lines 20-24.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.
		Page 44 lines 26-32.	Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.
Column 15 lines 58-60.	...are likely to be unique digital codes that may identify each programming or data unit received and the source of each.	Page 49 lines 26-28.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:
		Page 50 lines 14-20.	... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data.
Column 15 lines 60-62.	They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.	Page 49 lines 26-28.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:
		Page 50 lines 1-4.	... origins of transmissions (e.g., network source stations, broadcast stations, cable head end stations); dates and times....
Column 15 lines 62-63.	They may convey unique identifier codes for each program or commercial.	Page 49 lines 26-28.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:
		Page 50 lines 6-7.	... unique identifier codes for each program unit (including commercials)....
Column 15 lines 63-65.	In the case of data transmitted to the micro-computer, they may be unique codes that identify the source and suppliers of the data.	Page 49 lines 26-28.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:....

Appendix C

		Page 50 lines 19-20.	...unique codes that identify the sources and suppliers of computer data.
Column 15 lines 65-68.	In the case of data received at the printer, they may identify publications, articles, publishers, distributors, advertisements, etc.	Page 425 lines 35 to page 426 line 1.	...and causes said A T & T news item to be printed at said printer, 221.
		Page 421 lines 13-15.	...meter-monitor segment that contains the "program unit identification code" information of said A T & T news item and subject matter information of said binary information of "1".....
Column 15 line 68-Column 16 line 2.	The decoders, 131, 136, 138, 143, 145, 147, 149, and 150, may search for many types of codes, and the types described here provide only examples.	Page 50 lines 23-26.	The categories listed here provide only examples. Other types of information can exist in meter information and/or in monitor information, as will become apparent in this full specification.

XVI. COLUMN 16

Column 16 lines 3-4.	In FIG 5, each decoder receives every relevant signal received by its associated player or recorder unit.	Page 314 lines 34-35.	At any given subscriber station, any given SPAM decoder may merely monitor the operation of its associated....
		Page 315 lines 20-24.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.
Column 16 lines 5-10.	For example, TV set, 131, may receive programming from many sources including cable converter box, 133, video cassette recorder, 135, and videodisc player, 137. In every programming unit played on TV set, 132, TV decoder, 131, receives every signal for which it is instructed to search in a predetermined fashion and...	Page 313 lines 16-23.	Fig. 5 shows a variety of input apparatus with capacity for inputting programming (including SPAM information) selectively, via matrix switch, 258, to apparatus of the subscriber station of Fig. 5, intermediate apparatus with capacity for processing and/or recording inputted programming selectively, and output apparatus for displaying or otherwise outputting programming selectively to human senses.
		Page 314 lines 20-28.	Associated with each intermediate apparatus and output apparatus is one or more appropriate decoders. ... At TV tuner, 215, is TV decoder, 282. ... At TV monitor, 202M, is TV decoder, 145.
Column 16 lines 10-11.	...transfers the signals to signal processor, 130,...	Page 315 lines 6-8.	Fig. 5 shows each decoder as having capacity for transferring monitor information to signal processor, 200, by bus communications means.

Appendix C

		Page 315 lines 20-24.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.
Column 16 lines 11-13.	... which has means to identify the source decoder from which each signal that it receives comes.	Page 322 lines 33-35. Page 174 lines 4-14.	... monitor information (#3) except that the source mark information identifies decoder, 282, rather than decoder, 203. Under control of said instructions, said match causes control processor, 391, to cause matrix switch, 391, to commence transferring information from control processor, 391, to buffer/comparator, 14, of signal processor, 200, (while said switch is simultaneously transferring information from control processor, 391, to the CPU of microcomputer, 205); to transfer to said buffer/comparator, 14, header information that identifies a transmission of monitor information then particular decoder-203 information that is the source mark of said decoder, 203,....
Column 16 lines 13-18.	On all programming recorded by video cassette recorder, 135, decoder, 136, receives every relevant signal and transfers such signals to signal processor 130. Radio signal decoder, 138, operates similarly for radio, 141. Other signal decoder, 143, for microcomputer 142.	Page 314 lines 20-26.	Associated with each intermediate apparatus and output apparatus is one or more appropriate decoders. At radio tuner & amplifier, 138, are radio decoder, 138, and other decoder, 281. ... At video recorder/player, 217, is TV decoder, 218. At microcomputer, 205, is TV decoder, 203.
Column 16 lines 18-21.	TV signal decoder, 145, for TV set, 144 (which may receive programming inputs and associated signals generated or transferred by microcomputer, 142).	Page 322 line 26 - Page 323 line 11.	The programming of said "Wall Street Week" program is received at tuner, 215, and displayed at monitor, 202M. Accordingly, transmitting said messages will also cause the decoder associated with tuner, 215-- decoder, 282--to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is identical to said 1st monitor information (#3) and 2nd monitor information (#3) except that the source mark information identifies decoder, 282, rather than decoder, 203. Likewise, unless the Fig. 1B information overlaid at microcomputer, 205, covers and obliterates the embedded information of said messages that is inputted from divider, 4, to microcomputer, 205, and would otherwise be transmitted to monitor, 202M, in the combined programming outputted by microcomputer, 205, (which covering and obliterating does not occur in example #3), transmitting said messages will also cause the decoder, 145, to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is also identical to said 1st and 2nd monitor information (#3) except that the

Appendix C

Column 16 lines 21-24.	Other signal decoder, 147, for printer 146. And TV signal decoders, 150 and 149, for each channel of programming received and displayed by multi-picture TV set, 148.	Page 314 lines 20-30.	source mark information identifies decoder, 145. Associated with each intermediate apparatus and output apparatus is one or more appropriate decoders. ... At multi-picture TV monitor, 148, are TV decoders, 149 and 150. ... At printer, 221, is other decoder, 227.
Column 16 lines 25-32.	One particular advantage of these methods for monitoring programming is that, by locating the identifier signals in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for gathering statistics on what is recorded on video cassette recorders and on how people replay such recordings.	Page 319 lines 23-30.	One particular advantage of these methods for monitoring programming is that, by embedding the SPAM information in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for gathering statistics on what is recorded, for example, on video and audio cassette recorders and on how people replay such recordings.
Column 16 lines 32-35.	For example, a person might instruct video cassette recorder, 135, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.	Page 319 lines 30-33.	For example, a subscriber might instruct video recorder/player, 217, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.
Column 16 lines 35-39.	Recorder, 135, might receive the programming over Manhattan Cable TV channel 4 and record the programming from 7:00 PM to 7:30 PM on the evening of July 15, 1985.	Page 319 line 33 - Page 320 line 2.	Recorder, 217, might receive the programming over Manhattan Cable TV channel 4 and record the programming at the time of original broadcast transmission--from 7:00 PM to 7:30 PM on the evening of July 15, 1985.
Column 16 lines 39-41.	Each discrete bit of this information could be conveyed to recorder, 135, in a signal unit or units in the programming so received and recorded.	Page 320 lines 2-8.	Each discrete bit of this information could be transmitted to the subscriber station of Fig. 5 in meter-monitor information ... embedded in the transmitted programming. So embedding and transmitting said meter-monitor information would cause recorder, 217, to record said information.
Column 16 lines 41-43.	Decoder, 136, would identify these signals and transfer them to signal processor, 130.	Page 320 lines 9-10.	...decoder, 218, would detect said information and transfer said information to signal processor, 200.
Column 16 lines 43-45.	Subsequently, the person might play the recorded programming on TV set, 132, from 10:45 PM to 11:15 PM the same evening.	Page 320 lines 24-26.	Subsequently, the subscriber might play back the recorded programming and view said programming on TV monitor, 202M, from 10:45 PM to 11:15 PM the same evening.
Column 16 lines 45-47.	This time, TV signal decoder, 31, identifies the embedded signals and transfers them to signal processor, 131.	Page 320 lines 27-31.	So playing back and transmitting the recorded programming to monitor, 202M, would cause TV signal decoder, 145, to detect said meter-monitor information and transfer said information, together with appropriate source mark information, to signal processor, 131.
Column 16 lines 47-49.	Pre-recorded video cassettes and videodiscs could also contain unique embedded codes that would identify their usage...	Page 321 lines 1-5.	Pre-recorded, commercially distributed video and audio tapes, videodiscs, so-called "compact discs" of audio, and so-called "CD ROM" discs of data can also contain unique codes, embedded in the pre-recorded programming, that identify the use and usage of said programming.
Column 16 lines 49-50.	...(and could also transfer instructions to other external	Page 476 lines 18-22.	...this method enables any subscriber who records the

Appendix C

	equipment).	Page 473 lines 14-17.	transmission of said programming at a recorder/player, 217, to access the embedded information of said instructions automatically in this fashion whenever the recorded transmission of said programming is played back....
Column 16 lines 51-54.	Signal processor, 130, would probably receive these signals from decoders, 131, 136, 138, 143, 145, 147, 149, and 150) at its buffer/comparator unit, 14 (referring to FIG. 1)...	Page 315 lines 6-10.	At the station of Figs. 7 and 7f, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred....
		Page 32 lines 24-33.	Fig. 5 shows each decoder as having capacity for transferring monitor information to signal processor, 200, by bus communications means. Said information is received (and processed) at signal processor, 200, by the onboard controller, 14A,
		Page 32 lines 24-33.	(In circumstances where information collecting and processing functions are extensive—for example, when a given buffer/comparator, 14, must collect monitor information at a subscriber station with apparatus and/or communications flows that are extensive and complex—buffer/comparator, 14, may operate under control of a dedicated, so-called "on-board" controller, 14A, at buffer/comparator, 14, which is preprogrammed with appropriate control instructions and is controlled by controller, 20, similarly to the fashion in which controller, 12 is controlled by controller, 20.)
Column 16 lines 54-56.	...in a predetermined fashion that would permit signal processor, 130, to identify which decoder the individual signals come from...	Page 322 lines 33-35. Page 174 lines 4-17. Page 178 lines 27-35.	...that the source mark information identifies decoder, 282, rather than decoder, 203. Under control of said instructions, said match causes control processor, 39J, ... to transfer to said buffer/comparator, 14, header information that identifies a transmission of monitor information then particular decoder-203 information that is the source mark of said decoder, 203,.... Automatically, said instructions cause onboard controller, 14A, to compare the information at said source-mark-@14A memory, in a predetermined fashion, with particular pre-entered source-identification mark information that onboard controller, 14A, retains in memory associated with its pre-entered signal records of monitor information. A match results with that particular decoder-203 source mark information that is associated with the aforementioned record

Appendix C

Column 16 lines 56-57.	...and, in a predetermined fashion, create a signal string...	Page 180 lines 1-3.	of the prior programming displayed at monitor, 202M. Then said process-monitor-info instructions cause onboard controller, 14A, to initiate a new monitor record that reflects the new "Wall Street Week" programming.
Column 16 lines 57-58.	...by appending digital information to the received signal which information might...	Page 297 line 15. Page 180 lines 4-15.	...creating a meter record that records the decryption.... Automatically, said instructions cause onboard controller, 14A, in a predetermined fashion, to deplete ... except the source mark information associated with said record; to record information of said first named instance of "program unit identification code" information (which is the "program unit identification code" of said "Wall Street Week" program to a particular "program unit identification code" location at said record location; to select particular information located at said SPAM-input-signal-@14A register memory and record information at said record location; to select particular preprogrammed record....
Column 16 lines 59-61.	...identify the individual decoder, 131, 136, 138, 143, 145, 147, 149, or 150 and the time of receipt at signal processor, 130.	Page 181 lines 8-14.	In a predetermined fashion, onboard controller, 14A, also records in a particular monitor record field location at said record location a particular display unit identification code that identifies monitor, 202M, as the display apparatus of said new monitor record. In a predetermined fashion, signal processor, 200, records date and time information received from clock, 18, in first and last particular time field....
Column 16 lines 61-62.	To minimize the use of data recorder, 16, buffer/comparator, 14,...	Page 323 lines 24-26.	In the preferred embodiment, to minimize unnecessary duplication, prior to retaining monitor information in signal records, onboard controller, 14A, is preprogrammed to ... Then said process-monitor-info instructions cause onboard controller, 14A, to initiate a new monitor record....
Column 16 lines 62-64.	...may evaluate signals in a predetermined fashion and discard some signals rather than passing them to the recorder, 16.	Page 180 lines 1-2. Page 180 lines 13-15.	...select particular information located at said SPAM-input-signal-@14A register memory and record information at said record location; to select particular preprogrammed record....
Column 16 lines 64-66.	It may compare each signal from a given source such as decoder, 131, with other signals received earlier from the same source.	Page 180 lines 20-21. Page 178 lines 27-35.	...finally, to discard all unrecorded information of said 1st monitor information (#3).... Automatically, said instructions cause onboard controller, 14A, to compare the information at said source-mark-@14A memory, in a predetermined fashion, with particular pre-entered source-identification mark information that onboard controller, 14A, retains in memory associated with its pre-entered signal records of monitor information. A match

Appendix C

			results with that particular decoder-203 source mark information that is associated with the aforementioned record of the prior programming displayed at monitor, 202M.
Column 16 lines 66-67.	It may only count incoming duplicate signals...	Page 32 lines 9-12.	To avoid overloading digital recorder, 16, with duplicate data, buffer/comparator, 14, has means for counting and/or discarding duplicate instances of particular signal information....
Column 16 lines 67 to column 17 line 1.	...or it may append a time code to the end of the basic signal string formed around the first received signal ...	Page 181 lines 12-15.	In a predetermined fashion, signal processor, 200, records date and time information received from clock, 18, in first and last particular time field locations....

XVII. COLUMN 17

Column 17 lines 1-4.	...and after this time designation each time a new duplicate signal is identified so that the time code identifies the time of receipt of the last duplicate signal.	Page 191 lines 11-21.	... onboard controller, 14A, to locate the instance of "program unit identification code" information at said SPAM-input-signal-@14A register memory, in the fashion described above; to locate the instance of "program unit identification code" information in the aforementioned new monitor record; and to compare said first named instance to said second named instance. A match results. Under control of said process-monitor-info instructions, said match causes onboard controller, 14A, to record date and time information, received from clock, 18, at the aforementioned last particular time field of said new monitor record and, in a ...
Column 17 lines 4-6.	Whatever method is used, the buffer/comparator, 14, may discard all duplicate signals received.	Page 32 lines 9-12.	To avoid overloading digital recorder, 16, with duplicate data, buffer/comparator, 14, has means for counting and/or discarding duplicate instances of particular signal information ...
Column 17 lines 6-9.	At a time when buffer/comparator, 14, determines in a predetermined fashion that it will receive no further duplicate signals, it transfers the full signal string to recorder, 16.	Page 179 lines 14-24.	Automatically, said process-monitor-info instructions cause onboard controller, 14A, in a predetermined fashion, to locate the instance of "program unit identification code" information in said record of the prior programming displayed at monitor, 202M, and to compare said first named instance of "program unit identification code" information to said second named instance. No match results. Not resulting in a match causes onboard controller, 14A, to cause signal processor, 200, to record said record of prior programming at recorder, 16.
Column 17 lines 10-12.	Signal divider, 139, illustrates another type of monitoring that signal processing apparatus and methods can facilitate.	Page 315 lines 25-28.	In Fig. 5, decoder, 203, which is part of the signal processor system of the station of Fig. 5, not only monitors the operation of its associated apparatus, microcomputer, 205, but also controls said apparatus....

Appendix C

			processor, 391, ... to transfer to said buffer/comparator, 14, header information that identifies a transmission of monitor information then particular decoder-203 information that is the source mark of said decoder, 203, ... then all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3).")
Column 17 lines 21-24.	In this fashion, besides facilitating data gathering on how programming is used, signal processing apparatus and methods also permit the evaluation of how equipment is used.	Page 312 lines 33-35.	Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation and exemplifies one embodiment...
Column 17 lines 28-33.	...control information connections between signal processor, 130, and the remote decoders which would permit signal decoder, 130, to alter the methods of operation of said remote decoders. Such control information connections are included in signal processing apparatus and methods)	Page 318 lines 2-7.	By such bus means, onboard controller, 14A, can cause any on or all of said decoders to commence or cease processing and transmitting SPAM monitor information and can cause any one or all of said decoders to change the location or locations that are searched for SPAM information. Fig. 5 shows that, ...
Column 17 lines 34-36.	Methods for Governing or Influencing the Operation of Equipment that is External to Conventional Television and Radio Sets by	Page 390 line 13.	Automating Ultimate Receiver Stations
Column 17 lines 36-38.	Passing Instruction and Information Signals that are Embedded in Television and Radio Programming Transmissions to Such External Equipment	Page 390 line 13 to page 556 line 32.	<i>See generally.</i>
Column 17 lines 39-41.	Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming transmissions...	Page 15 lines 16-23.	The frequencies may convey television, radio, or other programming transmissions... The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ...
Column 17 lines 42-43.	...identify and discriminate among one or more pieces of external equipment ...	Page 34 lines 24-26.	... identifies the particular apparatus to which said signals are addressed, and outputs said signals to said apparatus...
Column 17 line 43.	... to which such signals are addressed, ...	Page 44 lines 14-15.	A command is an instance of signal information that is addressed to particular subscriber station apparatus; ...
Column 17 line 44.	... and transfer such signals to such equipment as directed.	Page 95 lines 18-21.	Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to ... and to transfer said message to ...
Column 17 lines 45-46.	This permits many valuable techniques for facilitating the operation of such external equipment.	Page 390 lines 26-29.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ultimate receiver stations

Appendix C

Column 17 lines 47-49.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site.	Page 390 lines 30-35.	in varieties of ways. Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
Column 17 lines 49-53.	Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 396 lines 8-10.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
Column 17 line 54.	Governing the Home or Office Environment	See generally page 396 line 30 to page 406 line 31. (Page 396 line 30 quoted herein.)	Automating U. R. Stations ... Regulating Station Environment
Column 17 lines 55-56.	FIG 6A illustrates a method for governing a home or office environment.	Page 396 lines 31-33.	Fig. 7A illustrates methods for regulating automatically the environment of subscriber stations such as homes and offices.
Column 17 lines 56-62.	One or more channels of television programming transmissions inputted to signal processor, 200, and cable converter box, 201, may contain signals intended for microcomputer, 205, which signals convey information on local weather conditions. Such signals might include current outside temperature and barometric readings. They might include forecast data.	Page 396 line 33 to page 397 line 4.	Particular SPAM regulating messages are embedded in one or more television program channels that are inputted to signal processor, 200, and cable converter box, 201. Said messages include weather bulletin messages that convey local weather information and instructions, including, for example, current outside temperature information, barometric readings, and forecast data.
Column 17 lines 62-64.	Signal processor, 200, is always operating and monitors all incoming channels.	Page 397 lines 17-20.	Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above;...
Column 17 lines 64-65.	It can convey such signals to microcomputer, 205, whenever it receives them.	Page 397 lines 22-26.	... and is preprogrammed at the controller, 39, of its decoder, 30, and at its controller, 12, to transfer to the decoder, 203, of the microcomputer, 205, of its station any detected SPAM message with an instance of particular URS-205 execution segment information...
Column 17 line 65 to Column 18 line 1.	TV signal decoder, 203, can also identify such signals but only in the one TV channel transferred by box, 201, to TV set, 202, and then only when TV set, 202, is on and operating.	Page 401 lines 19-23.	(TV signal decoder, 203, has capacity, itself, to detect said ... SPAM message but only when TV set 202, is on and operating and when the frequency of said master channel is the one TV channel transferred by box, 201, to TV set, 202.

XVIII. COLUMN 18

Column 18 lines 1-2.	Decoder, 203, transfers all received signals to processor or monitor, 204, ...	Page 400 lines 3-4	Receiving said Weather-Bulletin-125 SPAM message causes decoder, 203, to ...
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Appendix C

		Page 35 lines 11-15	... the overall video transmission and passes said information to a digital detector, 34, which acts to detect the digital signal information embedded in said information, using standard detection techniques well known in the art, and inputs detected signal information to controller, 39, which...
		Page 35 lines 24-27	... said audio information that is of interest. The digital detector, 37, detects signal information embedded in said audio information and inputs detected signal information to controller, 39.
		Page 35 lines 28-31	... separately defined transmission to a digital detector, 38, which detects signal information embedded in any other information portion of said television channel signal and inputs detected signal information to controller, 39.
Column 18 lines 2-4	... which identifies the signals as addressed to microcomputer, 205, and transfers them to microcomputer, 205.	Page 400 lines 6 - 18 See Fig. 3A regarding the composition of controller 39	Automatically, control processor, 39J, executes particular preprogrammed Weather-Bulletin controlled function instructions that cause said control processor, 39J, to locate the Weather-Bulletin-125 identification information of said message; to determine that said information does not match particular information at particular last-weather- bulletin-identification RAM associated with said control processor, 39J; to input the information of the information segment of said message to the CPU of microcomputer, 205; to retain information of said Weather-Bulletin-125 identification information at said last-weather-bulletin-identification RAM; and to cause said CPU to execute the information so inputted as a machine language job.
		Page 37 line 28 to page 38 line 8	Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed ... to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
Column 18 lines 4-7.	Microcomputer, 205, uses such received signals, in a	Page 400 lines 19-22.	So executing said information causes microcomputer, 205,

Appendix C

	predetermined fashion, to govern the operation of furnace, 206, air conditioning system, 207, and window opening and closing means, 208.	Page 401 lines 14-17.	to reducing the power usage of said air conditioning system, 207, causes any open windows at said station to be closed.
Column 18 line 8.	Co-ordinating a Stereo Simulcast	See generally page 406 line 33 to page 419 line 31. (Page 406 line 33 quoted herein.)	In this fashion, SPAM messages can control and regulate the operation of individual subscriber station controlled apparatus (the thermostat control of furnace, 206, for example, could be similarly controlled) Automating U. R. Stations ... Coordinating a Stereo Simulcast
Column 18 lines 9-11.	FIG. 6B illustrates a method for automatic co-ordination of a multimedia presentation in one place, in this case a stereo simulcast.	Page 406 lines 34-35.	Fig. 7B illustrates automatic control of one kind of combined medium presentation--a stereo simulcast.
Column 18 lines 11-13.	A person decides to watch a program on television that is stereo simulcast on a local radio station, 100.	Page 407 lines 9-11.	At the station of Fig. 7 and 7B, a subscriber decides to watch a particular television program the audio of which is stereo simulcast on a local radio station,
Column 18 lines 13-14.	The person turns on television, 202, and tunes to the proper channel.	Page 407 lines 12-15.	Said subscriber switches power on to TV set, 202, and manually selects the proper channel, which is, for example, channel 13, at the television tuner, 215, of said set, 202,
Column 18 lines 14-17.	TV signal decoder, 203, detects signals in the programming transmission on the channel which signals it transfers to monitor or processor, 204.	Page 408 lines 18-29.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of a "01" header, an execution segment of particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the "program unit identification code" information of said particular television program, appropriate padding bits, an information segment that contains particular 104.1-MHz information, and an end of file signal. Said message is detected at said decoder, 203, and inputted to said controller, 39,
Column 18 lines 17-19.	Monitor or processor, 204, determines that certain signals are addressed to switch, 212, and transfers these signals to switch, 212.	Page 408 lines 31-34. Page 95 lines 18-24.	Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209. Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to ..., and to transfer said message to So transferring said message is the controlled function that the information said header and execution segment cause

Appendix C

		Page 15 lines 16-22	to said controller, 44. The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...
		Page 411 lines 10-15	... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.
		Page 418 line 23 to page 419 line 15.	Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.
Column 18 lines 35-36.	The processors, 204 and 210, transfer this information to signal processor, 200, ...	Page 411 lines 10-15.	... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.
		Page 418 line 23 to page 419 line 31	Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.
		Page 36 lines 32-33.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.
		Page 38 lines 11-14.	Controller, 39, 44, or 47, has capacity for identifying more

Appendix C

		Page 173 line 30 to page 174 line 23.	than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.
Column 18 lines 36-37.	...for recording and subsequent transmission to a remote data collection site.	Page 411 line 28 to page 412 line 2.	The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1 st monitor information (#3).")
		Page 419 lines 4-15.	In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.
		Page 28 lines 25-35.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
Column 18 lines 38-41.	Simultaneously, processor, 200, is also monitoring	Page 28 lines 25-35.	[Signal processor 200 in Fig. 7] has capacity, at each station,

Appendix C

	sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.	Page 397 lines 17-20.	for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
Column 18 line 42.	Receiving Selected Information and/or Programming.	See generally page 419 line 33 to page 447 line 23. (Page 419 line 33 quoted herein.)	Automating U. R. Stations ... Receiving Selected Programming
Column 18 lines 43-45.	Figure 6C illustrates methods for monitoring multiple programming channels and selecting programming and information in a predetermined fashion.	Page 419 line 34 to Page 420 line 2.	Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.
Column 18 lines 45-47.	In this example, microprocessor, 205, is programmed to hold a portfolio of stocks...	Page 420 lines 3-4.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks...
Column 18 lines 47-48.	...and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 5-6.	...and to receive and process automatically news items about said stocks and about the industries of said stocks.
Column 18 lines 48-51.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200.	Page 420 lines 21-29.	Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions. The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200.
Column 18 lines 52-55.	The news services precede each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.	Page 420 line 32 to page 421 line 17.	Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit-News-Item SPAM message ... In due course, said remote news-service-A station transmits a particular A/T&T news item in a particular Transmit-A/T&T-News-Item message that is in said

Appendix C

Column 18 lines 62-65.	In a predetermined fashion, either microcomputer, 205, or signal processor, 200, instructs tuner, 223, to set cable converter box, 222, to the proper channel....	Page 423 lines 11-13. Page 424 lines 2-9.	Receiving said message causes said controller, 20, to cause a selected cable converter box, 222, to receive the transmission identified by said channel mark; Then receiving a particular to-223 instruction from said control processor, 20A, causes controller, 20, to transmit particular instructions, via said control information transmission link, to said tuner, 223, thereby causing said tuner, 223, to tune its associated cable converter box, 222, the to the particular channel transmission of said multi-channel cable transmission that is identified by said channel mark. Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
Column 18 lines 65-67.	...and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing	Page 426 lines 10-18.	

XIX. COLUMN 19

Column 19 lines 1-4.	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to play or record.	Page 419 line 34 to Page 420 line 2. Page 11 lines 5-10.	Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information. The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
Column 19 lines 5-8.	In another example, microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast.	Page 428 lines 21-26.	The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.
Column 19 lines 8-9.	Microcomputer, 205, is preinformed of the time of	Page 437 lines 1-3.	Determining a match causes microcomputer, 205,

Appendix C

		Page 267 lines 20-28.	cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...
Column 19 lines 15-18.	Signal processor, 200, receives this instruction from microcomputer, 205, at its processor or monitor, 12, which reacts,...	Page 288 lines 16-20.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) ... microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.
Column 19 lines 18-20.	...in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14.	Page 435 lines 16-18.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...
		Page 267 lines 20-28.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
		Page 435 lines 16-25.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ... Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.

Appendix C

Column 19 lines 31-34.	FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	Page 18 lines 24-27. page 450 line 27 to page 451 line 11.	Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations. (To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially FIG. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.) Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed. But the combining of Fig. 1C is just part of a larger process. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	Each weekday after 4:30 PM, a remote stock-price-data-transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
Column 19 lines 37-39.	It may receive these directly or it may automatically query a data service for them in a predetermined fashion.	Page 449 lines 26-35.	Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of

Appendix C

Column 19 lines 39-41.	It records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.
Column 19 lines 42-43.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to...	Page 450 lines 31-32.	Each weekday after 4:30 PM, a remote stock-price-data-transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
Column 19 lines 43-44.	...instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 20-23.	Microcomputer, 205, is preprogrammed to ... respond ... to ...
Column 19 lines 45-46.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening...	Page 21 lines 23-24.	...instruction signals embedded in the "Wall Street Week" programming transmission.
Column 19 lines 46-48.	...several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening...
Column 19 lines 48-53.	These signals instruct microcomputer, 205, to generate several graphic video overlays, which microcomputer, 205, has the means to receive and display, and to transmit these overlays to TV set, 202,...	Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
		Page 37 line 26 to page 38 line 8	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
		Page 24 lines 5-16.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE: EX1; recorded on the contained floppy disk, would be loaded at

Appendix C

		Page 451 lines 7-11.	RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
Column 19 line 53.	...upon command.	Page 26 lines 20-28.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first. (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
Column 19 lines 56-59.	The host then says, "Here is what the broader NASDAQ index did in the week past," and a studio generated graphic overlay is displayed on top of the first graphic.	Page 451 lines 25-32.	For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio—eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index.
Column 19 lines 59-60.	Then the host says, "And here is what your portfolio did."	Page 25 lines 33-34.	Then the host says, "And here is what your portfolio did."
Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...	Page 25 line 34-36.	At this point, an instruction signal is generated at said program originating studio,....
Column 19 lines 62-63	... and is transmitted in the programming transmission.	Page 25 line 35 to page 26 line 1.	... embedded in the programming transmission, and transmitted.
Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.	Said signal is identified by decoder, 203, transferred to microcomputer, 205; and ...

Appendix C

		Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
Column 19 lines 64-66.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...	Page 26 lines 1-8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.

XX. COLUMN 20

Column 19 lines 1-4.	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to play or record.	Page 419 line 34 to page 420 line 2. Page 11 lines 5-10.	Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information. The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming. The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.
Column 19 lines 5-8.	In another example, microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast.	Page 428 lines 21-26.	

Appendix C

Column 19 lines 8-9.	Microcomputer, 205, is preinformed of the time of cablecasting.	Page 437 lines 1-3.	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8-30 information to the controller, 20.
Column 19 lines 9-12.	When that time comes, microcomputer, 205, receives no program identification signals whatever from TV signal decoder, 203, which indicates that the set, 202, is not on.	Page 444 lines 33-34.	...decoder, 145, to determine, in a predetermined fashion, that power is not on to monitor, 202M, and to respond by....
Column 19 lines 12-13.	Microcomputer, 205, instructs signal processor, 200, to...	Page 288 lines 13-20.	As Fig. 4 shows, ... in the preferred embodiment, microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.
		Page 445 lines 8-10.	... cause microcomputer, 205, to input particular preprogrammed instructions to said controller, 20, ...
Column 19 lines 14-15.	...pass all program and channel identifiers on all programming being cablecast on the multi-channel system.	Page 435 lines 16-18.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C....
		Page 248 lines 22-26.	Via a conventional multi-channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.
		Page 250 lines 13-16.	Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...
		Page 252 lines 15-35.	Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter-monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment) then meter-monitor segment information that includes the "program unit identification code" and subject matter

Appendix C

		Page 267 lines 20-28.	information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...
Column 19 lines 15-18.	Signal processor, 200, receives this instruction from microcomputer, 205, at its processor or monitor, 12, which reacts,...	Page 288 lines 16-20.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) ... microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting preprogrammed instructions and information previously inputted to said microcomputer, 205.
Column 19 lines 18-20.	...in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14.	Page 435 lines 16-18. Page 435 lines 20-28.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ... All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message, of the station of Fig. 6 ... Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input

Appendix C

			-on-CC13-at-particular- 8:30 information to the controller, 20.
Column 19 lines 23-24.	Then, in a predetermined fashion, microcomputer, 205, may...	Page 439 lines 14-15. Page 437 lines 1-6.	...to receive the transmission of cable channel 13: ... Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...
Column 19 lines 24-25.	...instruct tuner, 214, to switch box, 201, to channel X...	Page 439 lines 9-15. Page 295 lines 6-8.	...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13: ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...
Column 19 lines 25-27.	...and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...	Page 439 lines 9-15. Page 445 lines 24-27.	...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13:instructions causes controller, 20, ...; to switch power on to video recorder/player, 217, ...
Column 19 lines 27-28.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on	Page 446 lines 18-23. Page 445 line 24 to page 446 line 1.	...controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program. ...instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...
Column 19 lines 28-29.	and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 35 to page 446 line 1. Page 446 lines 17-21.	...and to tune monitor, 202M, in a predetermined fashion. In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio...
Column 19 line 30.	Co-ordinating Multimedia Presentations in Time	See generally page 447 line 25 to page 457 line	Controlling Computer-based Combined Media Operations

Appendix C

Column 19 lines 31-34.	FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	Page 18 lines 24-27. 10. page 450 line 27 to page 451 line 11.	Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations. (To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.) Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed. But the combining of Fig. 1C is just part of a larger process. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first. Each weekday after 4:30 PM, a remote stock-price-data-transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in
Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	
Column 19 lines 37-39.	It may receive these directly or it may automatically query a data service for them in a predetermined fashion.	Page 449 lines 26-35.	

Appendix C

			any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.
Column 19 lines 39-41.	It records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data-transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. ... caused his microcomputer, 205, to be preprogrammed as described above;....
Column 19 lines 42-43.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to...	Page 450 lines 31-32.	Microcomputer, 205, is preprogrammed to ... respond ... to ...
		Page 21 lines 20-23.	...
Column 19 lines 43-44.	...instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
Column 19 lines 45-46.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening...	Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
Column 19 lines 46-48.	...several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
		Page 37 line 26 to page 38 line 8	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred, and to transfer said signals to said apparatus.
Column 19 lines 48-53.	These signals instruct microcomputer, 205, to generate several graphic video overlays, which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to transmit these overlays to	Page 24 lines 5-16.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or

Appendix C

	TV set, 202,...		words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
Column 19 line 53.	...upon command.	Page 451 lines 7-11. Page 26 lines 20-28.	...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first. (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
Column 19 lines 56-59.	The host then says, "Here is what the broader NASDAQ index did in the week past," and a studio generated graphic overlay is displayed on top of the first graphic.	Page 451 lines 25-32.	For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio—eg, the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index.
Column 19 lines 59-60.	Then the host says, "And here is what your portfolio did."	Page 25 lines 33-34.	Then the host says, "And here is what your portfolio did."
Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming...	Page 25 line 34-36.	At this point, an instruction signal is generated at said program originating studio....
Column 19 lines 62-63	... and is transmitted in the programming transmission.	Page 25 line 35 to page 26 line 1.	... embedded in the programming transmission, and transmitted.

Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...
Column 19 lines 64-66.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...	Page 26 lines 1-8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAP11ICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.

XXI. COLUMN 21

Column 21 lines 1-2.	Using Signaling and Decryption Techniques to Control Distribution of Copyrighted Materials	See generally page 278 line 22 to page 312 line 30. Especially, page 312 lines 12-28. See generally page 427 line 8 to page 447 line 23. See generally page 533 line 23 to page 556 line 32. Especially, page 548 line 1 to page 549 lines 31.	Regulating the Reception and Use of Programming
Column 21 lines 3-8.	FIG 6E illustrates a signaling and decryption technique which	Generally, page 312	And for example, the transmitted programming may be only

Appendix C

			determine that said selected information matches the aforementioned instance of enable-WSW-programming information at said particular controlled-function-invoking information location. So determining a match causes said control processor, 394, to execute the aforementioned transfer-this- message-to-controller-20 instructions.
Column 21 lines 36-38.	If signal processor, 200, has the customer's name and address and the bookstore is a retail outlet in good standing...	Page 534 lines 1-8.	Each farmer has a subscriber station that is identical to the station of Fig. 7 except that each station has two television recorder/players that are recorder/players, 217 and 217A; two television tuners, 215 and 215A; and a laser disk player, 232. Particular farm information of the specific farm of each farmer is recorded in a file named MY_FARM.DAT on a disk at the A: disk drive of the microcomputer, 205, of each station.
Column 21 lines 38-40.	...that has received from a remote site program information on the predetermined fashions in affect,...	Page 298 lines 10-21.	Receiving the "1st-WSW-program-enabling-message (#7) causes controller, 20, to execute the aforementioned load-and-run-@20 instructions, to load the 1st-stage-enable-WSW-program instructions of the information segment at particular RAM of controller, 20, then to execute the information so loaded as the so-called machine language instructions of one so-called job. Executing said 1st-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions, to affect a first stage of decrypting the video information of the "Wall Street Week" program transmission.
Column 21 lines 40-43.	...signal processor, 200, decrypts the signal word or words and transfers them to decryptor, 224, to serve as the code for the first stage of decryption.	Page 299 lines 13-22.	Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and outputting decrypted information to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224,...
Column 21 lines 44-45.	Decryptor, 224, then decrypts a part of the encrypted transmission...	Page 299 lines 22-27.	...thereby causing said decryptor, 224, to receive the information of said video portion (said information being, as explained above, encrypted digital video), to decrypt said information, and to transfer decrypted information of said video portion to matrix switch, 258.
Column 21 lines 45-46.	...and passes the partly decrypted transmission to signal stripper, 229, and signal generator, 230.	Page 305 lines 22-32.	...to commence transferring the information inputted from said converter box, 201, to the output that outputs to

Appendix C

			television tuner, 215; to commence transferring the information inputted from decryptor, 224, to the output that outputs to signal stripper, 229; to commence transferring the information inputted from signal stripper, 229, to the output that outputs to signal generator, 230; to commence transferring the information inputted from signal generator, 230, to the output that outputs to decryptor, 231; and to commence transferring the information inputted from decryptor, 231....
Column 21 lines 46-51.	In the decrypted portion of the partially decrypted transmission, signal processor, 200, identifies a second signal word or set of words which it decrypts in a predetermined fashion and passes to decryptor, 231, to serve as the code basis for the second stage of decryption.	Page 304 lines 10-11. Page 304 line 23 to page 307 line 8.	(Hereinafter, each of said SPAM messages is called a "2nd-WSW-program-enabling-message (#7).") Automatically, decryptor, 39K, decrypts the encrypted information of said message and transfers said message to EOFs valve, 39H. Automatically, EOF's valve, 39H, inputs the information of said message, unencrypted, to control processor, 39J, until the end of file signal of said message is detected. Automatically, control processor, 39J, determines that the unencrypted information of the execution segment of said message matches the aforementioned instance of enable-WSW-programming information at said particular controlled-function-invoking information location and executes the aforementioned transfer-this-message-to-controller-20 instructions. Executing said instructions causes the transfer of the remove.) Automatically, controller, 20, selects information of the aforementioned first three of the last four significant digits of the binary information of the aforementioned unique digital code at ROM, 21 and computes a particular Q quantity according to a particular formula that is preprogrammed in said 2nd-stage-enable-WSW-program instructions. ... The information of said Q quantity is the decryption key Aa.
Column 21 lines 51-53.	Signal processor, 200, also may instruct signal stripper, 229, to remove this second signal word or words.	Page 305 line 34 to page 306 line 4.	Automatically, controller, 20, causes signal stripper, 229, to strip information, in a fashion well known in the art, from a particular strip-designated portion of the video transmission received at said stripper, 229, and transfer the received video, without said stripped information, to matrix switch, 258.
Column 21 lines 53-63.	Signal processor, 200, also passes the customer's name and address and its own unique apparatus identifier code from read only memory, 21, to signal generator, 230, which generates a signal embedding the customer's name and	Page 306 lines 11-19.	Automatically, controller, 20, selects complete information of the aforementioned unique digital code at ROM, 21, transmits said complete information to signal generator, 230, and causes said generator, 230, to insert said complete

Appendix C

	address and the retail outlet's identification in the programming in a suitable place or places in a suitable fashion. (Signal processor, 200, may also transmit the customer's name and address to printer or other means, 221, for actual printing of the customer's name and address in the text.)		information, in a predetermined periodic fashion and in an inserting fashion well known in the art, into a particular insertion-designated portion of the video transmission received at said generator, 230, and to transfer the received video, with said inserted information, to matrix switch, 258.
Column 21 lines 63-65.	The transmission then passes through decryptor, 231, which completes the decryption process...	Page 305 lines 29-31,	...to commence transferring the information inputted from signal generator, 230, to the output that outputs to decryptor, 231;...
		and lines 14-16.	...and to affect a second and last stage of decrypting the digital video information of the "Wall Street Week" program transmission.
Column 21 lines 65-66.	...and passes the decrypted programming transmission to printer or other means, 221,...	Page 309 line 27 to page 310 line 3.	Determining that signal stripper, 229, and that signal generator, 230, are stripping and inserting correctly (after having determined that that decryptors, 224 and 231, are decrypting correctly) causes the controller, 20, of the station of Fig. 4 (and causes controllers, 20, at other stations where so determining occurs) to execute particular additional 2nd-stage-enable-WSW-program instructions, and executing said instructions causes controller, 20, to cause the apparatus of the station of Fig. 4 to commence transferring the decrypted ... information ... to microcomputer, 205,
		Page 312 lines 12-14.	And for example, the transmitted programming may be only audio (for example, of a radio transmission) or print (for example, of broadcast print) rather than television.
Column 21 lines 66-67.	...and also to signal processor, 200.	Page 305 lines 31-34.	...and to commence transferring the information inputted from decryptor, 231, to the output that outputs to said third alternate contact of switch, 1.
Column 21 line 67 to column 22 line 2.	Signal processor, 200, receives and analyzes the signal content of the programming output of decryptor, 231 to ensure that stripper, 229, and and generator, 230, have functioned properly.	Page 308 lines 13-30.	Receiving said signal causes controller, 20, under control of said 2nd-stage-enable-WSW-program instructions, to cause said control processor, 391, to transfer to controllers, 20, selected information of said check sequence; to compare said selected information to selected information of said 2nd-stage-enable-WSW-program instructions; and to determine that a match results, indicating that decryptors, 224 and 231, are decrypting received information correctly. Determining a match causes controller, 20, to determine, in a predetermined fashion, that signal stripper, 229, is correctly stripping information from the aforementioned strip-designated portion of the video transmission and transferring received video without said stripped information

Appendix C

			and that signal generator, 230, is correctly inserting complete information of the aforementioned unique digital code into the aforementioned insertion-designated portion of the video transmission and transferring received video with said inserted information.
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XXII. COLUMN 22

Column 22 lines 2-4.	If they have not, signal processor, 200, shuts down the decryption of the title and prevents its delivery to the customer.	Page 308 line 31 to page 309 line 11.	(Simultaneously other stations compare selected information of said check sequence to selected information of said 2nd-stage-enable-WSW-program instructions and verify the correct functioning of local signal strippers, 229, and generators, 230. At each station where a controller, 20, determines that a match does not result--which indicates that a decryptor, 224 or 231, is not decrypting its received information correctly and suggests that the preprogrammed SPAM operating information of said station may have been tampered with--or determines that a stripper, 229, or a generator, 230, fails to function correctly, so determining match causes said controller, 20, to cause all information of said 2nd-WSW-program-enabling-message (#7) to be erased from all memory of said station except for a particular portion of said 2nd-stage-enable-WSW-program instructions loaded at the RAM of said controller, 20,....
Column 22 line 5	The General Case	See generally page 533 line 23 to page 557 line 32.	A Summary Example #1 ... and the General Case
Column 22 lines 6-15.	It is obvious to one of ordinary skill in the art that the foregoing is presented by way of example only and that the invention is not to be unduly restricted thereby since modifications may be made in the structure of the various parts without functionally departing from the spirit of the invention. FIG 6 should make this clear. The receiver site depicted in FIG 6 has multiple means for receiving programming transmissions. All received programming is analyzed and evaluated by signal processor, 200.	Page 556 line 33 to page 557 line 32.	It is obvious to one of ordinary skill in the art that the foregoing is presented by way of example only and that the invention is not to be unduly restricted thereby since modifications may be made in the structure of the various parts or in the methods of their functioning without functionally departing from the spirit of the invention. Any SPAM message and any other programming transmission can be caused, through encryption/decryption and other SPAM regulating techniques of the present invention, to take affect fully only selected stations and station apparatus. Because any transmission station can invoke any SPAM controlled function by transmitting a SPAM message with meter-monitor segment information, invoking any given SPAM controlled function can also cause meter information and/or monitor information to be processed in the fashions

Appendix C

			described above at apparatus and stations where said controlled function is invoked. Intermediate transmission stations can be equipped with SPAM regulating capacity such as that illustrated in Fig. 4, monitoring capacity such as that illustrated in Fig. 5, and control information switching and bus communications capacity such as that illustrated in Figs. 7 and 8. Controlling such capacity by means of transmitted SPAM messages, a remote network origination and control station can transmit programming to intermediate transmission stations, regulate and meter the use of said programming at said stations, monitor the use and usage of said programming at said stations, and control communication of control information at said stations all in the fashions that apply above to ultimate receiver stations. And any given transmission station can cause its receiver stations to function automatically not only in the fashions described above in the sections on automating ultimate receiver stations but in any appropriate fashion that a network origination and control station can cause intermediate transmission stations to function automatically.
Column 22 lines 15-20.	Working with microcomputer, 205, which is preprogrammed to present received programming in predetermined fashions determined at the receiver site, signal processor, 200, permits and facilitates such presentations in accordance with the intentions of the suppliers of the programming at remote sites.	Page 428 line 21 to page 429 line 17.	<p>The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. In a predetermined fashion, said subscriber has caused to be included in said program-unit-of-interest information. (Microcomputers, 205, of selected other stations of said large plurality of stations are also so preprogrammed.) The station-specific-television-program-selection-and-display instructions at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular information that said subscriber will pay up to a certain limit--for example, twenty-five cents--to be permitted to receive said program and that, if the TV set, 202, of said station is switched off when information of the transmission of said program is detected, power should be switched on to said TV set, 202, and said program should be displayed at the monitor, 202M, of said set and, in addition, power should be switched on to the video recorder/player, 217, of said station, and said program should be recorded at said recorder/player, 217.</p> <p>The signal processor, 200, of said station scans</p>

Appendix C

			<p>sequentially all received television transmission channels in the fashion described above and is preprogrammed at the RAM associated with the control processor, 391, of its decoder, 30, to respond in a particular controlled function fashion whenever a SPAM message with an execution segment of particular available-television-program information is detected. Said signal processor, 200, has capacity for actuating and tuning TV set, 202, and video recorder, 217, and for controlling microcomputer, 205.</p>
Column 22 lines 20-24.	<p>Working together, signal processor, 200, and microcomputer, 205, can control all local equipment and manage local presentations in any fashion feasible given the nature of the local equipment and the programming.</p>	<p>Page 444 line 31 to page 445 line 22.</p>	<p>Automatically, controller, 20, transmits particular information to said decoder, 145, that causes said decoder, 145, to determine, in a predetermined fashion, that power is not on to monitor, 202M, and to respond by transmitting particular 202M-is-not-on information to controller, 20, via said link.</p> <p>The fact that monitor, 202M, is not on signifies that the subscriber of the station of Fig. 7 is not viewing television information at monitor, 202M, and suggests that said subscriber may not even be present at said station.</p> <p>Receiving said 202M-is-not-on information causes controller, 20, under control of said additional 2nd-stage-enable-WSW-program instructions, to cause microcomputer, 205, to input particular preprogrammed instructions to said controller, 20, which instructions reflect the specific fashion in which said subscriber wants any given selected program to be selected and displayed. Automatically, controller, 20, inputs a particular choose-mode-of-selection-and-display instruction and said 202M-is-not-on information to microcomputer, 205, and receiving said instruction and said information causes microcomputer, 205, in a predetermined fashion, to process the aforementioned station-specific-television-program-selection-and-display instructions. Automatically, under control of said instructions, microcomputer, 205, inputs to controller, 20, particular preprogrammed display-at-202M-and-record-at-217 instructions.</p>

APPENDIX D

**GLOSSARY OF DEFINED TERMS
TO THE 1987 PRIORITY INSTANT SPECIFICATION**

GLOSSARY OF DEFINED TERMS

Appendix D

1987 Priority U.S. Patent Application

The following terms are defined and used in specific ways in U.S. Patent No. 4,965,825 and its continuations, including Applicants' instant specification. Terms that appear at the left margin in quotation marks are formally defined in the patent disclosures. The meanings of terms that are shown below without quotation marks are made clear in the context in which they appear.

A

B

"broadcast" ... page 12 line 22 ... to transmit programming over-the-air.

"broadcast print" ... page 1 line 25 ... Radio and electronic print services such as stock brokers' so-called "tickers" and "broad tapes" are ... powerful, user friendly mass media. (Hereinafter, the electronic print mass medium is called, "broadcast print.")

C

cadence information ... page 60 line 12 ... Cadence information which consists of headers, certain length tokens, and signals that are called "end of file signals" enables subscriber station apparatus to distinguish each instance of header information in any given message stream and, hence, to distinguish the individual messages of said stream. In the present invention, subscriber station apparatus are preprogrammed to process cadence information.

"cablecast" ... page 12 line 23 ... to transmit programming over hard-wire.

"combined" media ... page 2 line 17 ... Today great potential exists for combining the capacity of broadcast communications media to convey ideas with the capacity of computers to process and output user specific information. One such combination would provide a new radio-based or broadcast print medium with the capacity for conveying general information to large audiences--e.g., "Stock prices rose today in heavy trading,"--with information of specific relevance to each particular user in the audience--e.g., "but the value of your stock portfolio went down." (Hereinafter, the new media that result from such combinations are called "combined" media.)

"combining synch command" ... page 26 line 20 ... (Hereinafter, an instruction such as the above

signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)

command ... page 44 line 12 ... As Fig. 2E shows, [a] header and execution and meter-monitor segments constitute [one form of] a command.

A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a header and an execution segment. With respect to any given command, its execution segment contains information that specifies the apparatus that said command addresses and specifies a particular function or functions that said command causes said apparatus to perform. (Hereinafter, functions that execution segment information causes subscriber station apparatus to perform are called "controlled functions.")

Commands often contain meter-monitor segments. ...

...
... page 47 line 11 ... Commands can address many apparatus and execute many controlled functions.

"control invoking instructions" ... page 23 line 24 ... see "invoking broadcast control"

"controlled functions" ... page 44 line 22 ... (Hereinafter, functions that execution segment information causes subscriber station apparatus to perform are called "controlled functions.")

...
... page 46 line 8 ... Examples of controlled functions include:

Load and run the contents of the information segment.

Decrypt the execution segment using decryption key G.

Decrypt the execution and meter-monitor segments using decryption key J.

Commence the video overlay combining designated in the meter-monitor segment.

Modify the execution segment to instruct URS microcomputer, 205, to commence overlay designated in meter-monitor segment, record the contents of the execution and meter-monitor segments, and transfer command to URS microcomputer, 205.

Print the contents of the information segment.

Record the contents of the execution and meter-monitor segments; transfer them to URS decryptors, 224, and execute the preprogrammed instructions that cause URS decryptors, 224, to commence decrypting with said contents as decryption key; execute preprogrammed instructions that cause URS cable converter boxes, 222, to switch to cable channel Z; execute preprogrammed instructions that cause URS matrix switches, 258, to configure its switches to transfer the input from converter boxes, 222, to decryptors, 224, and the output from decryptors, 224, to microcomputers, 205; modify the execution segment to instruct URS microcomputers, 205, to commence loading and executing the information received from URS decryptors, 224 via URS switches, 258.

"controller, 39" ... page 156 line 26 ... More precisely, controller, 39, of decoder, 203, and SPAM-controller, 205C, are one and the same (and are called, hereinafter, "controller, 39"). Thus the preferred embodiment of controller, 39, is configured and preprogrammed not only to control the detecting, correcting, converting, and executing of controlled functions at decoder, 203, but also to input to and execute at microcomputer, 205, the information of any given detected SPAM message that is addressed to URS microcomputers, 205.

"covert control" ... page 218 line 6 ... By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")

"covert control-invoking value" ... page 285 line 7 ... (Hereinafter, the normal binary value of a given instance of information that invokes a preprogrammed function--such as, for example, the "100110" that is the normal value of said execute-conditional-overlay-at-205 information--is called a "standard control-invoking value", and a value that temporary replaces a standard control-invoking value in the course a covert control application-- such as "111111" in example #6--is called a "covert control-invoking value".)

"CPU" ... page 22 line 33 ... central processor unit ... also defined at page 87 line 21 as ... central processor unit

D

"data module set" ... page 365 line 24 ... (Hereinafter, a data module that is transmitted to subscriber stations and processed by computers of said stations under control of instructions of a

program instruction set is called a "data module set,"

"data module set of Q" ... page 366 line 18 ... (Hereinafter, the data module set generated in example #9, under control of said intermediate generation set of Q, is called the "data module set of Q".)

"data module set of Q.1" ... page 378 line 31 ... (Hereinafter, the data module set generated at the station of Fig. 6 in example #10 is called the "data module set of Q.1", signifying that said set is one version of complete data module set information of said instance of the network transmission of Q.)

"data module set of Q.2" ... page 380 line 33 ... [Hereinafter, the data module set generated at said second station is called the "data module set of Q.2", signifying that said set is a second version of complete data module set information of said instance of the network transmission of Q.])

E

end of file signals ... page 62 line 26 ... distinctive end of file signals are required to communicate the locations of the ends of information segments to subscriber station apparatus. In the present invention, each end of file signal is transmitted immediately after the end of an information segment; said signal is part of the information of the message in which said segment occurs; and said signal is located at the end of said message.

At any given time, subscriber station apparatus are preprogrammed to process only one distinct signal as an end of file signal. In order for said apparatus to distinguish an instance of said signal from all other signal information, an end of file signal must differ distinctly from all other information. Signal information, especially information transmitted in an information segment, can vary greatly in composition. Accordingly, to be distinctive, an end of file signal must be long and complex to detect.

An end of file signal consists of a particular sequence of bits of binary information. In the preferred embodiment each bit is identical to every other bit; that is, disregarding error correction information, an end of file signal consists of a sequence of "1" bits (eg. "11111111") or "0" bits (eg. "00000000"). In the preferred embodiment, end of file signals are composed of "1" bits rather than "0" bits.

see EOFs, EOFs bit and MOVE bit

EOFs ... refers to End Of File Signal ... see end of file signals

"EOFs bit" ... page 64 line 1 ... An end of file signal consists of a particular sequence of bits of binary information. In the preferred embodiment each bit is identical to every other bit; that is, disregarding error correction information, an end of file signal consists of a sequence of "1" bits (eg. "11111111") or "0" bits (eg. "00000000"). In the preferred embodiment, end of file signals are composed of "1" bits rather than "0" bits. Zero is a value that occurs frequently in data and in mathematics, and however many bits may occur in a binary data word that consists of a series of "0" bits, the numeric value of said word remains zero.

Numeric values that are represented in binary form by a sequence of "1" bits, especially a sequence that is long, occur in data and mathematics far less frequently than zero. Thus the preferred composition bit is "1" because the chance of data being joined in a given signal in such a way that two or more instance of information combine inadvertently and create the appearance of an end of file signal is far smaller if the preferred bit is "1" than if it is "0". (Hereinafter, the preferred binary end of file signal composition bit, "1", is called an "EOFS bit," and for reasons that are explained below, the alternate binary bit, "0", is called a "MOVE bit.")

"EOFS Complete Flag" ... page 69 line 10 ... see EOFS valve components

"EOFS Empty Flag" ... page 69 line 10 ... see EOFS valve components

"EOFS Standard Length Location" ... page 69 line 10 ... see EOFS valve components

"EOFS Standard Word Location" ... page 69 line 10 ... see EOFS valve components

"EOFS valve" ... page 65 line 19 ... an apparatus, called an "EOFS valve," that detects end of file signals

EOFS valve components ... page 69 line 10 ... In the present invention, any microprocessor, buffer/comparator, or buffer can be adapted and preprogrammed to detect end of file signals. At any given SPAM apparatus that is so adapted and preprogrammed, particular dedicated capacity exists for said detecting. Said capacity includes standard register memory or RAM capacity, well known in the art, including three particular memory locations for comparison purposes, one particular memory location to serve as a counter, and three so-called "flag bit" locations to hold particular true/false information. (Hereinafter, said three particular memory locations, said one particular memory location, and said three flag bit locations are called the "EOFS Word Evaluation Location," "EOFS Standard Word Location," and "EOFS Standard Length Location"; the "EOFS WORD Counter"; and the "EOFS WORD Flag," "EOFS Empty Flag," and "EOFS Complete Flag" all respectively.)

"EOFS WORD" ... page 70 line 12 ... (Hereinafter, one signal word of EOFS bits is called an "EOFS WORD.")

"EOFS WORD Counter" ... page 69 line 10 ... see EOFS valve components

"EOFS Word Evaluation Location" ... page 69 line 10 ... see EOFS valve components

"EOFS WORD Flag" ... page 69 line 10 ... see EOFS valve components

"EPROM" ... page 33 line 17 ... erasable programmable ROM [or other forms of programmable nonvolatile memory]

execution segment ... page 45 line 22 ... Execution segment information includes the subscriber station apparatus that the command of said segment addresses and the controlled functions said apparatus is to perform. ("ITS" refers, hereinafter, to intermediate transmission station apparatus, and "URS" refers to ultimate receiver station apparatus.) [Some] examples of addressed apparatus include:

ITS signal processors (in 71 in Fig. 6),
ITS controller/computers (73 in Fig. 6),
URS signal processors (200 in Fig. 7),
URS microcomputers (205 in Fig. 7),
URS printers (221 in Fig. 7), and
URS utilities meters (262 in Fig. 7).

... page 47 line 16 ... Execution segment information operates by invoking preprogrammed operating instructions that exist at each subscriber station apparatus that is addressed. ... [see controlled function]

For each appropriate addressed apparatus and controlled function combination a unique execution segment binary information value is assigned. ...

For any given command, the execution segment information of said command invokes, at each relevant subscriber station apparatus, the preprogrammed operating instructions uniquely associated with its particular binary value in particular comparing and matching fashions that are described [extensively.]

The determination of appropriate addressed apparatus and controlled function combinations takes into account the facts that different apparatus, at any given subscriber station, can be preprogrammed to interpret any given instance of execution segment information differently and that subscriber station apparatus can be preprogrammed to automatically alter execution segment information. ...

...
... page 49 line 16 ... In the preferred embodiment, at any given time the number of binary information bits in any given instance of execution segment information is a particular constant number. [see "X."]

F

"field" ... page 50 line 28 ... see "meter-monitor field."

first combining synch command ... page 89 line 8 ... Each example focuses on the processing of the three signal messages of the Fig. 1C combining. The information of said messages include three combining synch commands and one program instruction set.

The first message is of the information associated with the first combining synch

command. [See page 23 line 35 through page 24 line 16 of the specification as well as "combining synch command" above.] Said first command has a "01" header, an execution segment, and a meter-monitor segment of six fields. Said command is followed by an information segment that contains said program instruction set; and said information segment is followed by an end of file signal. Said first command addresses URS microcomputers, 205, and causes said computers, 205, to load and run the program instruction set transmitted in the information segment. Each meter-monitor segment field of said command contains information that identifies one of the following:

- . the origin of said "Wall Street Week" transmission,
- . the subject matter of said "Wall Street Week" program,
- . the program unit of said program,
- . the day of said transmission within a particular one hundred year period,
- . the supplier of the program instruction set in the information segment following said first combining synch command, and
- . the format of said meter-monitor segment information.

G

"guide commands ... page 267 line 26 ... All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) By contrast, the 1st-, 2nd-, and 3rd-old-program-message (#5) messages, the 2nd-new-program-message (#5), and the 1st-old-radio-program- message (#5) inform no station control apparatus of new programming transmissions because said commands are addressed to no apparatus; the execution segment of each is the aforementioned pseudo-command. (Hereinafter, each said signal is called a "transparent command" because no subscriber station control apparatus "sees" said signal.)

H

"H" ... page 95 line 30 ... a particular preprogrammed constant number of the first converted bits of said binary information. Said constant number is the number of bits in a SPAM command header. (Hereinafter, said constant number is called "H".)

"H+X" ... page 127 line 13 ... At any given time, any given instance of "10" header message command information is of one constant binary length--the aforementioned header+exec constant length. (Hereinafter, said length is called "H+X" and is the sum of H plus X.)

"H+X+L" ... page 110 line 16 ... a particular preprogrammed constant number that is the sum of H plus X plus L to the x-bits information at said SPAM-length-info memory. (Hereinafter, said constant is called "H+X+L".)

header ... page 45 line 4 ... In simple preferred embodiments, at any given time the number of binary information bits in any given instance of header information is a particular constant number. In other words, every header contains the same number of bits. In the simplest preferred embodiment, said constant number is two, all headers consist of two bits binary information, and commands are identified by one of three binary headers:

10 - a command with an execution segment alone;

00 - a command with execution and meter-monitor segments; and

01 - a command with execution and meter-monitor segments that is followed by an information segment.

... page 54 line 12 ... In the simplest preferred embodiment, a fourth type of header is:

11 - an additional information segment transmission following a "01" header command and one or more information segments which additional segment is addressed to the same apparatus and invokes the same controlled functions as said "01" command.

I

information segment ... page 53 line 33 ... Information segments follow commands and can be of any length. Program instruction sets, intermediate generation sets, other computer program information, and data (all of which are organized in a fashion or fashions well known in the art) are transmitted in information segments. An information segment can transmit any information that a processor can process. It can transmit compiled machine language code or assembly language code or higher level language programs, all of which are well known in the art. Commands can execute such program information and cause compiling prior to execution.

"intermediate generation sets" ... page 42 line 8 ... (Hereinafter, instances of computer program information that cause intermediate transmission station apparatus to generate program instruction set information and/or command information are called "intermediate generation sets.") ... see also "program instruction set" ... "intermediate generation set" is also defined at page 356 line 13 as ... (Hereinafter, an instance of computer program instructions that cause a computer, at an intermediate transmission station, to generate information of a program instruction set is called an "intermediate generation set.")

"intermediate generation set of Q" ... page 359 line 9 ... (Hereinafter, the intermediate generation set that causes any given intermediate transmission station to generate a program instruction set of an instance of the transmission of the programming of program unit Q is called the "intermediate generation set of Q".)

"intermediate transmission stations" ... page 40 line 33 ... (Hereinafter, ... stations that receive and retransmit broadcast transmissions are called "intermediate transmission stations", ...

"interval," as in "interval Q" of unit Q ... page 355 line 26 ... When the aforementioned remote distribution station inputs information to computer, 73, via network, 98, regarding unit Q, said distribution station inputs information that Q is particular combined medium programming and instructs computer, 73, to commence particular program instruction set generation in a particular fashion at a particular time interval prior to the scheduled playing of Q. (Hereinafter, a particular instance of such a time period is called "interval," as in "interval Q" of unit Q.)

"invoking broadcast control" ... page 23 line 25 ... Operating in said preprogrammed fashion under control of said first set of instructions, microcomputer, 205, reaches a stage at which the subscriber can input information only under control of signals embedded in the broadcast transmission and can reassume control of microcomputer, 205, ... only by executing a system reset (or so-called "warm boot") which on an IBM PC is accomplished by ... (Hereinafter, this first set of instructions is called the "control invoking instructions," and the associated steps are called "invoking broadcast control.")

"ITS" ... page 45 line 25 ... refers to intermediate transmission station apparatus.

J

K

L

"L" ... page 103 line 4 ... a third preprogrammed constant number of next bits and record said bits at particular memory. Said third constant number is the particular number of bits in an

instance of SPAM meter-monitor format field length token information. (Hereinafter, said third constant number is called "L".)

"length token" ... page 52 line 5 ... each instance of a meter-monitor segment includes a format field that contains information that specifies the particular format of the meter-monitor segment of said instance. Within said field is a particular group of binary information bits (hereinafter, the "length token") that identifies the number of bits in a meter-monitor segment of said format. Each alternate length token has a unique binary information code. The number of information bits in each instance of a length token is the smallest number of bits capable of representing the binary value of the total number of meter-monitor segment bit length alternatives. And the unique code of each different alternative is within the range of binary numbers thus defined.

...
... page 53 line 20 ... In the preferred embodiment, the bits of the length token are the first bits in each meter-monitor segment. ...

M

"message" ... page 59 line 24 ... All of the information transmitted with a given header is called a "message." Each header begins a message, and each message begins with a header. More specifically, a message consists of all the SPAM information, transmitted in a given transmission, from the first bit of one header to the last bit transmitted before the first bit of the next header.

A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.

"meter command" ... page 48 line 33 ... The preferred embodiment includes ... one command that is addressed to URS signal processors, 200, (hereinafter, the "meter command") but does not instruct said processors, 200, to perform any controlled function. [This command is] always transmitted with meter-monitor segment data that receiver station apparatus automatically process and record. By transmitting ... meter command signals, transmission stations cause receiver station apparatus to record meter-monitor segment information without executing controlled functions. ... The meter command causes apparatus such as controller, 12, of Fig. 2D to transmit meter information to buffer/comparator, 14, without performing any controlled function.

"meter-monitor field" ... page 50 line 28 ... For each category of [meter information and/or monitor] information, a series of binary bits (hereinafter, a "field" or "meter-monitor field") exists in the meter-monitor segment to contain the [category] information.

meter-monitor segments ... page 44 line 26 ... contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described [in many places of the disclosure, especially examples #3, #4 and #5.

...

... page 49 line 27 ... Examples of categories of [meter information and/or monitor] information include:

- meter instructions that instruct subscriber station meter apparatus to record particular meter-monitor segment information and maintain meter records of said information;

- origins of transmissions (eg., network source stations, broadcast stations, cable head end stations);

- dates and times;

- unique identifier codes for each program unit (including commercials);

- codes that identify uniquely each combining in a given combined medium program unit; codes that identify the subject matter of a program unit;

- unique codes for programming (other than programming identified by program unit codes) whose use obligates users to make payments (eg., royalties and residuals); and

- unique codes that identify the sources and suppliers of computer data.

For each category of information, a series of binary bits (hereinafter, a "field" or "meter-monitor field") exists in the meter-monitor segment to contain the information. In any given category such as origins of transmissions, each distinct item such as each network source, broadcast, or cable head end station has a unique binary information code. In the preferred embodiment, the number of information bits in that category's meter-monitor field is the smallest number of bits capable of representing the binary value of the total number of distinct items. And the information code of each distinct item is within the range of binary numbers thus defined. In the preferred embodiment, date and time fields have sixteen bits.

Few commands require meter-monitor information of every information category. Often commands require no more than the identification codes of a specific combined medium program unit and of a specific combined medium combining within said program unit.

Because the amount of information in meter-monitor segments varies from command

to command, in the preferred embodiment more than one format exists at any given time for meter-monitor segment information. ...

Because the number of categories of meter-monitor information varies from one command to the next, the length of meter-monitor segments varies. ...

In the preferred embodiment, each instance of a meter-monitor segment includes a format field that contains information that specifies the particular format of the meter-monitor segment of said instance. Within said field is a particular group of binary information bits (hereinafter, the "length token") that identifies the number of bits in a meter-monitor segment of said format. ...

In the preferred embodiment, each distinct meter-monitor segment format (including each distinct field format) also has a unique binary information code. ...

...

In the preferred embodiment, the bits of the length token are the first bits in each meter-monitor segment. ...

"MMS" ... page 104 line 7 ... (Hereinafter, the exact number of bits in any given meter-monitor segment is called, "MMS".)

"MMS-L" ... page 103 line 29 ... (Hereinafter, the number of the particular selected bit-length-number alternative associated with any given length token is called "MMS-L" to signify that said number is L bits less than the number bits in the meter-monitor segment in which said length token occurs.)

"MOVE bit" ... page 64 line 1 ... see "EOFS bit"

N

"normal transmission location" ... page 86 line 12 ... (Hereinafter, the preferred normal location for transmitting signals in any given communication medium is called, the "normal transmission location".)

"null outputs" ... page 159 line 10 ... Among such other outputs is one or more (hereinafter called, "null outputs") with capacity for accepting binary information and merely recording said information at particular memory associated with matrix switch, 39I, thereby overwriting and obliterating information previously recorded at said memory. The purpose of such a null output is to provide means whereby said switch can automatically cause information of any selected SPAM message to be discarded rather than transferred to addressed apparatus.

O

"original transmission stations" ... page 40 line 31 ... (Hereinafter, stations that originate broadcast

transmissions are called "original transmission stations," ...

Appendix D

P

"padding bits" ... page 55 line 22 ... particular bits are added at the end of any command that is not already a multiple of the particular signal word bit length that applies in signal processor system communications at the subscriber stations to which said transmission is transmitted. (Hereinafter, said bits are called "padding bits.") Padding bits communicate no command information nor are padding bits part of any information segment. The sole purpose of padding bits is to render the information of any given SPAM command into a bit length that is, by itself, complete for signal processor system communication. Padding bits are added to command information prior to the transmission of said information at said station, and all subscriber station apparatus are preprogrammed to process padding bits. The particular number of padding bits that are added to any given command is the smallest number of bits required to render the bit length of said command into a multiple of said signal word bit length.

"pre-transmission evaluation" ... page 65 line 29 ... To prevent such erroneous processing, in the preferred embodiment, after the initial generation of any given instance of SPAM message information (not including end of file signal information) and before the embedding and transmitting of said instance, said information is transmitted through an apparatus, called an "EOFS valve," that detects end of file signals and is described below. If said valve detects in said information particular information that constitutes an end of file signal, before being embedded and transmitted, the binary information of said instance is rewritten, in a fashion well known in the art that may be manual, to cause substantively the same information processing at subscriber stations without containing an instance of information that is identical to the information of an end of file signal. (Hereinafter, such pre-transmission processing of a message is called a "pre-transmission evaluation.")

"program instruction set" ... page 24 line 16 ... a ... set of [processing] instructions [conveyed in the information segment of a SPAM message] that is loaded and run [at receiver station (including ITS) computing apparatus] ... [at page 42 line 2, the meaning of "program instruction sets" is further defined as ->] (Hereinafter, instances of computer program information that cause ultimate receiver station apparatus to generate and display user specific information are called "program instruction sets.") ... [see also "intermediate generation set"]

"program instruction set of Q" ... page 365 line 18 ... (Hereinafter, the program instruction set generated in example #9, under control of said intermediate generation set of Q, is called the "program instruction set of Q".)

"program instruction set of Q.1" ... page 378 line 23 ... (Hereinafter, the program instruction set generated at the station of Fig. 6 in example #10 is called the "program instruction set of

Q.1", signifying that said set is one version of complete program instruction set information of said instance of the network transmission of Q.)

"program instruction set of Q.2" ... page 380 line 20 ... [Hereinafter, the program instruction set generated at said second station is called the "program instruction set of Q.2", signifying that said set is a second version of complete program instruction set information of said instance of the network transmission of Q.]

"program originating studio" ... page 20 line 29 ... (Hereinafter, a studio or station that originates the broadcast transmission of programming is called the "program originating studio.")

"program unit identification code" ... page 90 line 1 ... (Hereinafter, meter-monitor information that identifies the program unit of a given program may also be called the "program unit identification code".)

"programming" ... page 11 line 7 ... The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.

"pseudo command" ... page 48 line 31 ... The preferred embodiment includes one appropriate command (hereinafter called the "pseudo command") that is addressed to no apparatus ... [This command is] always transmitted with meter-monitor segment data that receiver station apparatus automatically process and record. By transmitting pseudo command ... signals, transmission stations cause receiver station apparatus to record meter-monitor segment information without executing controlled functions. The pseudo command enables a so-called ratings service to use the same system for gathering ratings on conventional programming transmissions that it uses for combined media without causing combined media apparatus to execute controlled functions at inappropriate times (eg., combine overlays onto displays of conventional television programming).

Q

R

"RAM" ... page 23 line 1 ... random access memory

"revoking broadcast control." ... page 513 line 25 ... the steps associated with returning a microcomputer, 205, from broadcast control to local control are called "revoking broadcast control."

"ROM" ... page 31 line 9 ... read only memory

second combining synch command ... page 89 line 3 ... Each example focuses on the processing of the three signal messages of the Fig. 1C combining. The information of said messages include three combining synch commands and one program instruction set.

...
... page 90 line 4 The second message is of the information associated with the second combining synch command. [See page 25 line 34 through page 26 line 8 of the specification as well as "combining synch command" above.] Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205. Said second command causes said computers, 205, to combine the Fig. 1A information of each microcomputer, 205, with the information of Fig. 1B and transmit the combined information to monitors, 202M. Each meter-monitor segment field of the second command contains information of one of the following:

- . the subject matter of said "Wall Street Week" program,
- . the program unit of said program,
- . the unique code of said overlay given said program unit information,
- . the minute of said transmission within a particular one month period, and
- . the format of said meter-monitor segment information.

segment ... page 44 line 4 ... Fig. 2E shows one example of the composition of signal information (excluding bit information required for error detection and correction). The information in Fig. 2E commences with a header which is particular binary information that synchronizes all subscriber station apparatus in the analysis of the information pattern that follows. Following said header are three segments: an execution segment, a meter-monitor segment, and an information segment. As Fig. 2E shows, the header and execution and meter-monitor segments constitute a command.

"signal processor" ... page 15 line 8 ... signal processing apparatus defined at page 15, line 8.

"signal processor alternative #1" ... page 34 line 1 ... For certain applications, one particular embodiment (hereinafter, "signal processor alternative #1") can be configured to receive only other inputs at buffer/comparator, 8, in which case said embodiment has no oscillator, 6; switch, 1; mixers, 2 and 3; or decoders, 30 or 40.

"signal processor alternative #2" ... page 34 line 6 ... For other particular applications, another

particular embodiment (hereinafter, "signal processor alternative #2") can be configured to receive only inputs at buffer/comparator, 14, in which case said embodiment has only buffer/comparator, 14; recorder, 16; clock, 18; and the control device apparatus associated with controller, 20.

"signal records" ... page 31 line 34 ... Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records")

"signal unit" ... page 14 line 26 ... (The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a unique purchase order number identifying the proper use of a programming unit, or a general instruction identifying whether a programming unit is to be retransmitted immediately or recorded for delayed transmission. The term "signal word" hereinafter means ...

"signal word" ... page 14 line 32 ... The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. Such strings may or may not have predetermined data bits to identify the beginnings and ends of words. Signal words may contain parts of signal units, whole signal units, or groups of partial or whole signal units or combinations.)

signals ... page 40 line 17 ... The signals of the present invention are the modalities whereby stations that originate programming transmissions control the handling, generating, and displaying of programming at subscriber stations.

...
SPAM signals control and coordinate a wide variety of subscriber stations. Said stations include ... "local affiliate" broadcast stations that receive and retransmit single network transmissions; ... "cable system headends" that receive and retransmit multiple network and local broadcast station transmissions; and ... "media centers" in homes, offices, theaters, etc. where subscribers view programming.

...
... page 43 line 32 ... SPAM signals contain binary information of the sort well known in the art including bit information required for error correction using forward error correction techniques, well known in the art, in point to multi-point communications; request retransmission techniques, well known in the art, in point to point communications; and/or other error correction techniques, as appropriate.

Fig. 2E shows one example of the composition of signal information (excluding bit information required for error detection and correction). The information in Fig. 2E commences with a header which is particular binary information that synchronizes all subscriber station apparatus in the analysis of the information pattern that follows.

Following said header are three segments: an execution segment, a meter-monitor segment, and an information segment. As Fig. 2E shows, the header and execution and meter-monitor segments constitute a command.

"SPAM" ... page 40 line 21 ... (The term, "SPAM," is used, hereinafter, to refer to signal processing apparatus and methods of the present invention.)

"specified condition commands" ... page 44 line 33 ... Particular commands (called, hereinafter, "specified condition commands") always contain meter-monitor segments. Said commands cause addressed apparatus to perform controlled functions only when specified conditions exist, and meter-monitor information of said commands specifies the conditions that must exist.

"standard control-invoking value" ... page 285 line 7 ... see "covert control-invoking value"

T

third combining synch command ... page 89 line 3 ... Each example focuses on the processing of the three signal messages of the Fig. 1C combining. The information of said messages include three combining synch commands and one program instruction set.

...
... page 90 line 28 The third message is of the information associated with the third combining synch command. [See page 26 line 33 through page 27 line 7 of the specification as well as "combining synch command" above.] Said third command has only a "10" header and an execution segment and addresses URS microcomputers, 205. Said command causes said computers, 205, to cease combining and transmit only the received composite video transmission to monitors, 202M, and to continue processing in a predetermined fashion (which fashion may be determined by the aforementioned program instruction set).

"transparent commands ... page 267 line 34 ... All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) By contrast, the 1st-, 2nd-, and 3rd-old-program-message (#5) messages, the 2nd-new-program-message (#5), and the 1st-old-radio-program- message (#5) inform no station control apparatus of new programming transmissions because said commands are addressed to no apparatus; the execution segment of each is the aforementioned pseudo-command. (Hereinafter, each said signal is called a "transparent command" because no subscriber station control apparatus "sees" said signal.)

U

"ultimate receiver stations" ... page 40 line 31, page 40 line 33, and page 40 line 35 ... (Hereinafter, ... stations where subscribers view programming are called "ultimate receiver stations.")

"URS" ... page 45 line 26 ... refers to ultimate receiver station apparatus.

V

W

"w-bits information" ... page 103 line 29 ... Said match causes SPAM-controller, 205C, to place particular preprogrammed bit-length-number information at said SPAM-length-info-@205 memory. (Said particular bit-length-number information is called, hereinafter, "w-bits information".) Said information is the precise number of bits, following the last of said L bits, that remain in the meter-monitor segment of the command associated with said length token. Said number is not a preprogrammed constant value such as H, X, and L that is the same for every SPAM command with a meter-monitor segment. Rather, said number is a variable that may differ from one SPAM meter-monitor segment to the next. More precisely, it is, for any given meter-monitor segment, a selected one of several preprogrammed bit-length-number information alternatives.

"W-token information" ... page 103 line 15 ... Automatically SPAM-controller, 205C, compares the information at said SPAM-length-info-@205 memory with preprogrammed token-comparison-@205 information and determines that said information at memory matches particular token-comparison-@205 information (which particular information is called, hereinafter, "W-token information").

"wireless" ... page 248 line 21 ... over-the-air (hereinafter, "wireless")

X

"X" ... page 96 line 11 ... a second preprogrammed constant number of next bits and record said bits, in their order after conversion, at particular SPAM-exec register memory. Said second constant number is the particular number of bits in a SPAM execution segment. (Hereinafter, said second constant number is called "X".)

Y

Z

MESSAGES DEFINED IN SPECIFIC EXAMPLES

EXAMPLE #1

EXAMPLE #2

"2nd meter information (#2)" ... page 152 line 34 ...

EXAMPLE #3

"1st monitor information (#3)" ... page 174 line 21 ...

"2nd monitor information (#3)" ... page 190 line 14 ...

EXAMPLE #4

"1st meter-monitor information (#4)" ... page 213 line 32 ...

"2nd meter-monitor information--second precondition failed--(#4)." ... page 238 line 16 ...

"2nd meter-monitor information (#4)." ... page 239 line 3 ...

"2nd monitor information (#4)" ... page 240 line 40 ...

EXAMPLE #5

1st command (#5) ... page 251 line 17 ...

"1st-old-program-command (#5)" ... page 252 line 13 ...

"1st-new-program-message (#5)" ... page 253 line 1 ...

"2nd command (#5)" ... page 256 line 5 ...

"2nd-old-program-message (#5)" ... page 256 line 27 ...

"2nd-new-program-message (#5)" ... page 257 line 5 ...

"3rd command (#5)." ... page 259 line 25 ...

"3rd-old-program-message (#5)" ... page 260 line 12 ...

"3rd-new- program-message (#5)" ... page 260 line 29 ...

"4th command (#5)" ... page 263 line 5 ...

"1st-old-radio-program-message (#5)" ... page 264 line 28 ...

"1st-new-radio-program-message (#5)" ... page 265 line 9 ...

EXAMPLE #6

"1st supplementary message (#6)" ... page 281 line 35 ...

"2nd supplementary message (#6)" ... page 281 line 35 ...

EXAMPLE #7

please-fully-enable-WSW-on-CC13-at-particular-8:30 information ... page 289 line 28 ...

"local-cable-enabling-message (#7)" ... page 291 line 19 ...

"1st-WSW-program-enabling-message (#7)" ... page 297 line 23 ...

"1st- WSW-decryption-check (#7)" ... page 300 line 15 ...

"2nd-WSW-program-enabling-message (#7)" ... page 304 line 10 ...

"2nd-WSW-decryption-check (#7)" ... page 308 line 5 ...

Prepare-To-Retransmit-WSW message ... page 430 line 35 ...

Select-WSW-Program-Unit SPAM message ... page 435 line 19 ...

EXAMPLE #8

"first- network-cue-to-transmit-locally message (#8)" ... page 335 line 30 ...

"first-network-cue-to-transmit-network message (#8)" ... page 335 line 35 ...

"select-A-message (#8)," the "select-B-message (#8)," the "select-C-message (#8)," and so forth up to the "select-Z- message (#8)," each message referring to the corresponding program unit: A, B, C, and so forth up to Z, respectively, and said messages are called collectively the "cue-to-select messages (#8)." ... page 342 line 14 ...

EXAMPLE #9

"generate-set-information message (#9)" ... page 359 line 3 ...

"first cueing message (#9)" ... page 366 line 27 ...

"align-URS- microcomputers-205 message (#9)" .. Page 368 line 6 ...

"synch-SPAM-reception message (#9)" ... page 368 line 19 ...

"control-invoking message (#9)" ... page 368 line 30 ...

"transmit-data-module-set message (#9)" ... page 369 line 22 ...

"data-module-set message (#9)" ... page 369 line 30 ...

"transmit-and-execute-program-instruction-set message (#9)" ... page 371 line 9 ...

"program-instruction-set message (#9)" ... page 371 line 17 ...

"cease-stripping-and-embedding message (#9)" ... page 372 line 13 ...

"1st commence-outputting message (#9)" ...page 372 line 25 ...

"2nd commence-outputting message (#9)" ... page 372 line 26 ...

"3rd commence-outputting message (#9)" ... page 372 line 27 ...

"1st cease-outputting message (#9)" ... page 372 line 27 ...

"4th commence-outputting message (#9)" ... page 372 line 28 ...

"5th commence-outputting message (#9)" ... page 372 line 29 ...

"6th commence-outputting message (#9)" ... page 372 line 30 ...

"2nd cease-outputting message (#9)" ... page 372 line 30 ...

"second cueing message (#9)" ... page 373 line 5 ...

"disband-URS- microcomputers-205 message (#9)" ... page 373 line 22 ...

EXAMPLE #10

"generate-set-information message (#10)" ... page 377 line 34 ...

"load-set-information message (#10)" ... page 381 line 23 ...

"align-URS-microcomputers-205 message (#10)" ... page 382 line 26 ...

"synch- SPAM-reception message (#10)" ... page 383 line 4 ...

"control-invoking message (#10)" ... page 383 line 13 ...

"transmit-data-module-set message (#10)" ... page 383 line 24 ...

"transmit-and-execute-program-instruction-set message (#10)" ... page 385 line 7 ...

"program-instruction-set message (#10)" ... page 385 line 14 ...

"cease-stripping-and-embedding message (#10)" ... page 387 line 9 ...

"1st commence-outputting message (#10)" ... page 387 line 25 ...

"2nd commence-outputting message (#10)" ... page 387 line 26 ...

"3rd commence-outputting message (#10)" ... page 387 line 26 ...

"1st cease-outputting message (#10)" ... page 387 line 27 ...

"4th commence-outputting message (#10)" ... page 387 line 28 ...

"5th commence-outputting message (#10)" ... page 387 line 29 ...

"6th commence-outputting message (#10)" ... page 387 line 29 ...

"2nd cease-outputting message (#10)" ... page 387 line 30 ...

"disband-URS-microcomputers-205 message (#10)" ... page 387 line 34 ...

"local-output-cueing message (#10)" ... page 388 line 7 ...

EXAMPLE #11

first-master-cueing message (#11) ... page 545 line 32 ...

first-national-cueing message (#11) ... page 546 line 3 ...

second-master-cueing message (#11) ... page 546 line 33 ...

transmit-program-instruction-set SPAM message (#11) ... page 547 line 17 ...

local-second-cueing message (#11) ... page 552 line 12 ...

second-cueing message (#11) ... page 554 line 22 ...